Product Information



Precoated EIA 96-Well Plate (solid or strip) Item No. 400004, 400005, 400006, 400007, 400008, or 400009

COMMENTS:

Each plate is coated with antibody. This Safety Data Sheet (SDS) is for the antibody only. An SDS on this material is not required as this substance is a naturally occurring animal product. However, we do recommend the following minimum precautions when using this substance:

- Do NOT get in eyes, on skin, or on clothing.
- Do NOT take internally.
- Wear protective gloves and safety glasses.
- Keep container closed.
- Store at correct temperature.
- Do NOT reuse this container.
- Do NOT release this material to the environment; dispose of by incineration in accordance with federal, state, and local regulations.
- Wash thoroughly after handling.

WARNING:

Not for human or animal disease diagnostics or therapeutic drug use.

The above information is believed to be correct but should only be used as a guide. Cayman Chemical disclaims any express or implied warranty as to the accuracy of the above information and shall not be held liable for any direct, incidental, or consequential damages resulting from reliance on the above information.

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Revision Date: 12/21/2012 Supercedes Revision: 08/27/2010

Cayman Chemical

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Web www.caymanchem.com



Revision: 01/10/2013 Supercedes Revision: 04/07/2010

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Product Code:	400029				
Product Name:	Potassium Hydroxide				
Intended Use:	For research use only, not for human or veterinary use.				
Manufacturer Information					
Company Name:	Cayman Chemical Company				
Emergency Contact:	-	ithin USA and Car	nada: +1 (800)424-9300		
		utside USA and Ca			
0,	Cayman Chemic		+1 (734)971-3335		
	www.caymanche				
	2. Haza	rds Identifi	cation		
GHS Classification	Placard	Key word	GHS Hazard		
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed		
Skin Corrosion/Irritation, Category 1A	Corrosive	Danger	Causes severe skin burns and eye damage		
Serious Eye Damage/Eye Irritation, Category 1	Corrosive	Danger	Causes serious eye damage		
Aquatic Toxicity (Acute), Category 3 GHS Hazard Phrases:	none		Harmful to aquatic life		
	P260: Do not bre P280: Wear prot manufacturer/suj	ective gloves/cloth pplier or the compo	s/mist/vapours/spray. ing and eye/face protection as specified by the		
	P330: Rinse mou P303+361+353: Rinse skin with v P363: Wash com P305+351+338: lenses, if present P301+330+331: P304+340: IF IN for breathing.	uth. IF ON SKIN (or h water/shower. taminated clothing IF IN EYES: Rins and easy to do. Co IF SWALLOWEE WHALED: Remove	e cautiously with water for several minutes. Remove c	othing	
GHS Storage and Disposal Phrases:	Please refer to Se	ection 7 for Storag	e and Section 13 for Disposal information.		
Route(s) of Entry:	Inhalation? Yes	Skin? Yes E	yes? Yes Ingestion? Yes Other: Injection		



Target Organs:	Eyes, Respiratory system, Skin.
LD 50 / LC 50:	Please refer to Section 11.
Signs and Symptoms Of Exposure:	Causes severe digestive tract burns with abdominal pain and vomiting.
	Contact may cause ulceration of the conjunctiva and cornea.
	Exposure can cause: burning sensation, coughing, wheezing, laryngitis, shortness of breath,
	headache, nausea, and vomiting.
	Eye damage may be delayed.
	Inhalation may result in spasm, inflammation, and edema of the larynx and bronchi, chemical
	pneumonitis, and pulmonary edema.
	May cause circulatory system failure.
	May cause deep, penetrating ulcers of the skin.
	May cause irreversible eye damage.
	May cause perforation of the digestive tract.
	Prolonged or repeated skin contact may cause dermatitis.
	To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By No data available. Exposure:

lazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
. Potassium hydroxide	1310-58-3	3 100.0 %	215-181-3	R22-35	TT2100000
	4. Firs	t Aid Measu	ires		
Emergency and First Aid Procedures:					
In Case of Inhalation:		air. If not breathing nmediate medical at		biration or give oxygen	by trained
In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.				
In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.				Have eyes
In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so be medical personnel.				
Indication of any immediate medical	No data availabl	e.			
attention and special treatment needed:					
attention and special treatment needed:	5. Fire F	ighting Mea	sures		
attention and special treatment needed: Suitable Extinguishing Media:		ighting Mea		ry chemical spray.	
		stant foam, carbon d		ry chemical spray.	
Suitable Extinguishing Media:	Use alcohol-resi DO NOT USE V Emits toxic fume	stant foam, carbon d	ioxide, water, or di ons.		
Suitable Extinguishing Media: Unsuitable Extinguishing Media:	Use alcohol-resi DO NOT USE V Emits toxic fume	stant foam, carbon d VATER. es under fire conditio	ioxide, water, or di ons.		
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards: Flash Pt:	Use alcohol-resi DO NOT USE V Emits toxic fume May react with r	stant foam, carbon d VATER. es under fire condition netals, releasing flar	ioxide, water, or di ons.		
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards:	Use alcohol-resi DO NOT USE V Emits toxic fume May react with r No data.	stant foam, carbon d VATER. es under fire condition netals, releasing flar	ioxide, water, or di ons.		
Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards: Flash Pt: Autoignition Pt:	Use alcohol-resi DO NOT USE V Emits toxic fund May react with r No data. No data availabl	stant foam, carbon d VATER. es under fire conditionetals, releasing flan e.	ioxide, water, or dr ons. nmable hydrogen g		



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6	. Accidenta	al Release Mea	asures			
Protective Precautions, Protective Equipment and Emergency Procedures:	As conditions wa	urrant, wear a NIOSH ap	vide adequate ventilation. proved self-contained breathing ap er boots, safety goggles, and heav	· · ·		
Environmental Precautions:	Take steps to avo	bid release into the enviro	onment, if safe to do so.			
Steps To Be Taken In Case Material Is Released Or Spilled:	-	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.				
	7. Hand	ling and Stora	ge			
Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.					
Precautions To Be Taken in Storing:	Keep container ti Store in accordan	ghtly closed. ace with information liste	d on the product insert.			
Other Precautions:	Air sensitive. Hygroscopic.					
Hazard Label Information:	Avoid contact wi Wash thoroughly	-	ot reuse this container. Use wit	h adequate ventilation.		
8. Ex	posure Con	trols/Personal	Protection			
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits		
1. Potassium hydroxide	1310-58-3		CEIL: 2 mg/m3	No data.		
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe		
1. Potassium hydroxide Protective Equipment Summary - Hazard Label Information:	-	nical-resistant gloves F	STEL: 2.0 mg/m3 Eye wash station in work area L Vent Hood	No data. Lab coat Safety		
Engineering Controls (Ventilation etc.):	-	osures, local exhaust ven ommended exposure limi	tilation, or other engineering cont ts.	rols to control airborne		
Eye Protection:	Safety glasses					
Protective Gloves:	Compatible chem	nical-resistant gloves				
Other Protective Clothing:	Lab coat					
Respiratory Equipment (Specify Type):	NIOSH approved	l respirator, as conditions	s warrant.			
Work/Hygienic/Maintenance Practices:	Facilities storing safety shower.	NIOSH approved respirator, as conditions warrant. Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.				
Environmental Exposure Controls:	No data available	ð.				
9.	Physical an	d Chemical Pr	operties			
Information on Basic Physical and Chemical			•			
Physical States:	[]Gas []]	Liquid [X] Solid				
Appearance and Odor:	Solid pellets					
pH:	13.5					
Melting Point:	360.00 C					
Boiling Point:	1320.00 C					
Flash Pt:	No data.					
Evaporation Rate:	No data.					
				Multi-region form		



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Vapor Pressure (vs. Air or mm Hg):	1 MM_HG at 719.0 C
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	2.04
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
Other Information	
Percent Volatile:	No data.
Formula:	КОН
Molecular Weight:	56.10
	10. Stability and Reactivity
Reactivity:	No data available.
Stability:	Unstable [] Stable [X]
Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
Conditions To Avoid:	absorbs carbon dioxide from air
	do not heat above melting point
	with limited amounts of water violent boiling may occur
Polymerization:	Will occur [] Will not occur [X]
Incompatibility - Materials To Avoid:	acids
	anhydrides
	azides
	Contact with aluminum, tin, and zinc liberates hydrogen gas.
	Contact with nitromethane and similar nitro compounds causes formation of shock-sensitive salt
	copper flammable liquids
	halogens
	magnesium
	metals
	nitro compounds
	nitromethane
	organic materials trichloroethylene
	water
Hazardous Decomposition Or Byproducts:	carbon monoxide
	hydrogen gas
	potassium oxides
	11. Toxicological Information
Toxicological Information:	The toxicological effects of this product have not been thoroughly studied.
	Potassium Hydroxide - Toxicity Data: Oral LD50 (rat): 273 mg/kg;
	Potassium hydroxide - Irritation Data: Eyes (rabbit): 1 mg (24h) moderate; Skin (human): 50 mg
Observed Table 1 1 77	(24h) severe; Skin (rabbit): 50 mg (24h) severe;
Chronic Toxicological Effects:	Potassium hydroxide - Investigated as a mutagen.
	Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.
	Potassium hydroxide RTECS Number: TT2100000



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	-		-	Supercedes Rev	
Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
Potassium hydroxide	1310-58-3		n.a.	n.a.	n.a.
	12. Ecolo	ogical Inform	nation		
General Ecological Information:			harmful to aquatic	-	
	Runoff from fire	control or dilution	water may cause pol	lution.	
	13. Dispos	sal Conside	rations		
Waste Disposal Method:	Dispose in accord	dance with local, sta	ate, and federal regul	lations.	
	14. Trans	sport Inform	nation		
Globally Harmonized System of Classification					
Acute Toxicity: Oral, Category 4 - Warning! Skin Corrosion/Irritation, Category 1A - Dan Serious Eye Damage/Eye Irritation, Category Aquatic Toxicity (Acute), Category 3 - Harn	ger! Causes severe sk 1 - Danger! Causes s	kin burns and eye dam	age		
LAND TRANSPORT (US DOT)					
DOT Proper Shipping Name	Potassium hydrox	xide, solid			
DOT Hazard Class:	8				
DOT Hazard Label:	CORROSIVE				
UN/NA Number:	1813				
Packing Group:	II				
LAND TRANSPORT (European ADR/RID)					
ADR/RID Shipping Name	Potassium hydro:	xide, solid			
UN Number:	1813				
Hazard Class:	8 - CORROSIVE	3			
Packing Group:	II				
AIR TRANSPORT (ICAO/IATA)					
ICAO/IATA Shipping Name	Potassium hydro:	xide, solid			
UN Number:	1813				
Hazard Class:	8 - CORROSIVE	2			
Packing Group:	II				
IATA Classification:	8				
Additional Transport Information:	Transport in acco	ordance with local, s	state, and federal reg	ulations.	
	15 Regul	latory Inforr	nation		
European Community Hazard Symbol codes					
European Community Risk and Safety Phrase					
R20/21/22 - Harmful by inhalation, in conta R35 - Causes severe burns. S22 - Do not breathe dust. S24/25 - Avoid contact with skin and eye S26 - In case of contact with eyes, rinse S36/37/39 - Wear suitable protective clothi S45 - In case of accident or if you feel u US EPA SARA Title III	act with skin and if sv s. • immediately with pl ng, gloves and eye/fa	enty of water and seek		er possible.)	
	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
Hazardous Components (Chemical Name)	CAS#	0000002 (2110)			000.110



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Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.6
. Potassium hydroxide	1310-58-3	No	No	Inventory	No
Regulatory Information Statement:	•	epared in accordanc ective 67/548/EEC	e with 29 CFR 1910 as amended.	.1200, Regulation (EC) No.1272/2008
	16. Oth	er Informat	ion		
Revision Date:	01/10/2013				
Company Policy or Disclaimer					
make their own investigations to determ	-	_			



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Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Ide	ntification o	f the Subs	tance/Mixture and of the		
1.1 Product Code:	400031				
Product Name:	Acetic Anhydric	le			
1.2 Relevant identified uses of the subst	ance or mixture and	d uses advised a	gainst		
Relevant identified uses:	For research use	only, not for hun	nan or veterinary use.		
1.3 Details of the Supplier of the Safety I					
Company Name:	Cayman Chemical Company				
Emergency Contact:	CHEMTREC Within USA and Canada: +1 (800)424-9300				
Alternate Emergency Contact:	CHEMTREC O	utside USA and C			
Information:	Cayman Chemic		+1 (734)971-3335		
Web site address:	www.caymanch				
	-				
	Section 2. H				
SHS Classification	Placard	Key word	GHS hazard phrase		
Flammable Liquids, Category 3	Flame	Warning	Flammable liquid and vapor		
Acute Toxicity: Inhalation, Category 4	Exclamation point	Warning	Harmful if inhaled		
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed		
Skin Corrosion/Irritation, Category 1B	Corrosive	Danger	Causes severe skin burns and eye damage		
GHS Precaution Phrases:	P210: Keep awa P280: Wear prof manufacturer/su P261: Avoid bre P264: Wash han	evere skin burns a y from {heat/spar ective gloves/clot pplier or the comp athing dust/fume/ ds thoroughly after	ks/open flames/hot surfaces} No smoking. thing and eye/face protection as specified by the petent authority. /gas/mist/vapours/spray.		
GHS Response Phrases:	Rinse skin with P304+340: IF IN for breathing. P312: Call a PO P301+312: IF S' P330: Rinse mo P363: Wash con P305+351+338: lenses, if presen P301+330+331:	water/shower. NHALED: Remov ISON CENTER of WALLOWED: Ca uth. taminated clothin IF IN EYES: Rin t and easy to do. O IF SWALLOWE	se cautiously with water for several minutes. Remove conta		
GHS Storage and Disposal Phrases:			ge and Section 13 for Disposal information.		



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2.3 Adverse Human Health Effects and	Causes burns.
Symptoms:	Harmful if swallowed or inhaled.
	Material is extremely destructive to the tissue of the mucous membranes and upper respiratory
	tract.
	May be harmful by skin absorption.
	To the best of our knowledge, the toxicological properties have not been thoroughly investigated.
Target Organs:	Eyes, Skin.
LD 50 / LC 50:	Please refer to Section 11.
Medical Conditions Generally Aggravated By	No data available

Medical Conditions Generally Aggravated By No data available. Exposure:

ous Components (Chemical Name) etic anhydride	CAS # 108-24-7 Section 4.	Concentration 100.0 %	EC# 203-564-8	Risk Phrases R10-20/22-34	RTECS #	
				R10-20/22-34	AK1925000	
	Section 4.					
		FIRST AID INE	easures			
Description of First Aid Measures:						
In Case of Inhalation:		-	-	piration or give oxygen	by trained	
In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.					
In Case of Eye Contact:		-		for at least 20 minutes. H	Have eyes	
In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so b medical personnel.					
Important Symptoms and Effects, Acute and Delayed:	No data available					
Indication of any immediate medical on and special treatment needed:	No data available					
Se	ction 5. Fi	re Fighting I	Measures			
Suitable Extinguishing Media:			-	nical spray.		
Unsuitable Extinguishing Media:	DO NOT USE W	ATER.				
Flammable Properties and Hazards:	Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Sensitive to static discharge.					
Flash Pt:	49.00 C Method	l Used: Closed Cu	р			
Autoignition Pt:	332.00 C					
Explosive Limits:	LEL: 2.7%	at 25.0 C U	EL: 10.3%	at 25.0 C		
Hazardous Combustion Products:	No data available					
Fire Fighting Instructions:	-	ull protective gear t		-	SH approved or	
	In Case of Skin Contact: In Case of Eye Contact: In Case of Ingestion: Important Symptoms and Effects, acute and Delayed: Indication of any immediate medical on and special treatment needed: Set Suitable Extinguishing Media: Insuitable Extinguishing Media: Flammable Properties and Hazards: Flash Pt: Autoignition Pt: Explosive Limits: Hazardous Combustion Products:	In Case of Skin Contact: Immediately wash contaminated cloud In Case of Eye Contact: Hold eyelids apar examined and test In Case of Ingestion: Wash out mouth y unconscious personne Important Symptoms and Effects, acute and Delayed: No data available on and special treatment needed: No data available on and special treatment needed: Section 5. Fin Suitable Extinguishing Media: Use alcohol-resist Use water spray to Unsuitable Extinguishing Media: DO NOT USE W Flammable Properties and Hazards: Can release vapor Container explosis Sensitive to static Flash Pt: 49.00 C Method Autoignition Pt: 332.00 C Explosive Limits: LEL: 2.7% Hazardous Combustion Products: No data available Fire Fighting Instructions: As in any fire, we	In Case of Skin Contact:Immediately wash skin with soap and contaminated clothing. Get medical at Hold eyelids apart and flush eyes wit examined and tested by medical personIn Case of Eye Contact:Hold eyelids apart and flush eyes wit examined and tested by medical personIn Case of Ingestion:Wash out mouth with water provided unconscious person. Get medical atter medical personnel.Important Symptoms and Effects, cute and Delayed:No data available.Indication of any immediate medical on and special treatment needed:No data available.Suitable Extinguishing Media:Use alcohol-resistant foam, carbon di Use water spray to cool fire-exposedUnsuitable Extinguishing Media:DO NOT USE WATER.Flammable Properties and Hazards:Can release vapors that form explosivo Container explosion may occur under Sensitive to static discharge.Flash Pt:49.00 CMethod Used: Closed Cu 332.00 CAutoignition Pt:332.00 CExplosive Limits:LEL: 2.7% at 25.0 CUHazardous Combustion Products:No data available.Fire Fighting Instructions:As in any fire, wear self-contained br	In Case of Skin Contact: Immediately wash skin with soap and plenty of water free contaminated clothing. Get medical attention if symptotics and Heat Provided Person is conscioned unconscious person. Get medical attention. Do NOT in medical personnel. In Case of Ingestion: Wash out mouth with water provided person is conscioned unconscious person. Get medical attention. Do NOT in medical personnel. Important Symptoms and Effects, incute and Delayed: No data available. Indication of any immediate medical on and special treatment needed: No data available. Suitable Extinguishing Media: Do NOT USE WATER. Flammable Properties and Hazards: Can release vapors that form explosive mixtures at tem Container explosion may occur under fire conditions. Sensitive to static discharge. Flash Pt: 49.00 C Method Used: Closed Cup Autoignition Pt: 332.00 C Explosive Limits: LEL: 2.7% at 25.0 C UEI: 10.3% at may fire, wear self-contained breathing apparatus	In Case of Skin Contact: Immediate medical attention. Immediate medical attention. In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Recontaminated clothing. Get medical attention if symptoms occur. Wash clothing. In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Recontaminated clothing. Get medical personnel. In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything unconscious person. Get medical attention. Do NOT induce vomiting unless di medical personnel. In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything unconscious person. Get medical attention. Do NOT induce vomiting unless di medical personnel. Important Symptoms and Effects, No data available. Indication of any immediate medical No data available. Indication of any immediate medical No data available. Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, or dry chemical spray. Use water spray to cool fire-exposed containers. Unsuitable Extinguishing Media: DO NOT USE WATER. Flammable Properties and Hazards: Can release vapors that form explosive mixtures at temperatures at or above the Container explosion may occur under fire conditions. Sensitive to static discharge. Flash Pt: 49.00 C Method Used: Closed Cup Autoignition Pt: 332.00 C Explosive Limits: LEL: 2.7% at 25.0 C UEL: 10.3% at 25.0 C Hazardous Combustion Products: No data available.	



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Sectio	n 6. Accid	ental Release N	leasures		
6.1 Protective Precautions, Protective Equipment and Emergency Procedures:	Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).				
6.2 Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.				
6.3 Methods and Material For Containment and Cleaning Up:	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.				
Se	ection 7. H	andling and Sto	orage		
7.1 Precautions To Be Taken in Handling:	Avoid prolonged Keep away from	dust/fume/gas/mist/vapour or repeated exposure. sources of ignition. ry measures against static			
7.2 Precautions To Be Taken in Storing:	Keep away from heat, sparks, and flame. Keep container tightly closed. Store in accordance with information listed on the product insert.				
Hazard Label Information:	Avoid contact wi Wash thoroughly	•	reuse this container. Use with ac	lequate ventilation	
Section 8.	Exposure	Controls/Perso	nal Protection		
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits	
1. Acetic anhydride	108-24-7	5 ppm	5 ppm	No data.	
Hazardous Components (Chemical Name) 1. Acetic anhydride	CAS # 108-24-7	Britain EH40 TWA: 2.5 mg/m3 (0.5 pp STEL: 10 mg/m3 (2 ppm)		Europe TWA: 0.5 mg/m3	
Protective Equipment Summary - Hazard Label Information:	-		e wash station in work area Lab ont Hood	coat Safety	
8.2.1 Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborn levels below recommended exposure limits.				
8.2.2.1 Eye Protection:	Safety glasses				
8.2.2.2 Protective Gloves:	Compatible chem	cial-resistant gloves			
Other Protective Clothing:	Lab coat				
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	respirator, as conditions v	varrant.		
Work/Hygienic/Maintenance Practices:	Do not take intern Facilities storing safety shower. Wash thoroughly	or utilizing this material sl	nould be equipped with an eyewash	facility and a	
8.2.3 Environmental Exposure Controls:	No data available				

Section 9. Physical and Chemical Properties

	,				
9.1 Information on Basic Physical and Chemical Properties					
Physical States:	[] Gas [X] Liquid [] Solid				
Appearance and Odor:	A clear, colorless solution				
Melting Point:	-73.00 C				
Boiling Point:	138.00 C - 140.00 C / 760 mm Hg.				
Flash Pt:	49.00 C Method Used: Closed Cup				



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Evaporation Rate:	No data.				
Explosive Limits:	LEL: 2.7% at 25.0 C UEL: 10.3% at 25.0 C				
Vapor Pressure (vs. Air or mm Hg):	4 MM_HG at 20.0 C				
Vapor Density (vs. Air = 1):	3.52				
Specific Gravity (Water = 1):	1.08				
Solubility in Water:	No data.				
Autoignition Pt:	332.00 C				
Explosive Properties:	No data available.				
Oxidizing Properties:	No data available.				
9.2 Other Information					
Percent Volatile:	No data.				
Formula:	C4H6O3				
Molecular Weight:	102.10				
S	ection 10. Stability and Reactivity				
10.1 Reactivity:	No data available.				
10.2 Stability:	Unstable [] Stable [X]				
10.3 Stability Note(s):	Stable if stored in accordance with information listed on the product insert.				
10.4 Conditions To Avoid:	heat, flames and sparks Reacts violently with water.				
10.3 Polymerization:	Will occur [] Will not occur [X]				
10.5 Incompatibility - Materials To Avoid:	acids alcohols bases oxidizing agents powdered metals				
10.6 Hazardous Decomposition Or Byproducts:	reducing agents water carbon dioxide carbon monoxide				
Se	ction 11. Toxicological Information				
11.1 Information on Toxicological Effects: Chronic Toxicological Effects:	Acetic Anhydride - Toxicity Data: Oral LD50 (rat): 1,780 mg/kg; Inhalation LC50 (rat): 1,000 ppm/4h; Dermal LD50 (rabbit): 4 ml/kg; Irritation Data: Eyes (rabbit): severe; Skin (rabbit): mil Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Acetic anhydride RTECS Number: AK1925000				
Hazardous Components (Chemical Name)	CAS # NTP IARC ACGIH OSHA				
Acetic anhydride Carcinogenicity:	108-24-7 n.a. n.a. n.a. NTP? No IARC Monographs? No OSHA Regulated? No				
~	ection 12. Ecological Information				
S					

Multi-region format



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Section 13. Disposal Considerations									
13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.									
Section 14. Transport Information									
14.1 LAND TRANSPORT (US DOT)									
DOT Proper Shipping Name Acetic anhydride									
DOT Hazard Class:8 (3)									
DOT Hazard Label: CORROSIVE, FLAMMABLE LIQUID									
UN/NA Number: 1715									
Packing Group:	II								
14.1 LAND TRANSPORT (European ADR/R	ID)								
ADR/RID Shipping Name Acetic anhydride									
UN Number: 1715									
Hazard Class:	Hazard Class: 8 (3) - CORROSIVE, FLAMMABLE LIQUID								
Packing Group:	ing Group: II								
14.3 AIR TRANSPORT (ICAO/IATA)	14.3 AIR TRANSPORT (ICAO/IATA)								
ICAO/IATA Shipping Name	TA Shipping Name Acetic anhydride								
UN Number:	1715								
Hazard Class:	8 (3) - CORROSIVE, FLAMMABLE LIQUID								
Packing Group: II									
IATA Classification: 8 (3)									
Additional Transport Information: Transport in accordance with local, state, and federal regulations.									
Se	ction 15. R	egulatory In	formation						
European Community Hazard Symbol codes									
European Community Risk and Safety Phras	es								
R10 - Flammable.									
R20/22 - Harmful by inhalation and if sw	allowed.								
R34 - Causes burns. S26 - In case of contact with eyes, rins	immediately with pl	enty of water and seek	medical advice						
S36/37/39 - Wear suitable protective cloth	• •	•	incultar auvite.						
S45 - In case of accident or if you feel		*	ow the label whenever p	oossible.)					
US EPA SARA Title III			-						
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110				

Hazardous Components (Chemical Name)	CA5 #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110		
1. Acetic anhydride	108-24-7	No	Yes 5000 LB	No	No		
Other US EPA or State Lists							
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65		
1. Acetic anhydride	108-24-7	No	No	Inventory	No		
Section 16. Other Information							
Revision Date:	05/21/2013						

Company Policy or Disclaimer

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



SAFETY DATA SHEET

Polysorbate 20

Revision: 05/02/2013 Supercedes Revision: 09/13/2012

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



1.1 Product Code:	400035					
Product Name:	Polysorbate 20					
Synonyms:	Tween 20 [™] ;					
1.2 Relevant identified uses of the substance	,	luses advised a	nainst			
Relevant identified uses:	For research use only, not for human or veterinary use.					
1.3 Details of the Supplier of the Safety Dat		only, not for hun	ian or veterinary use.			
Company Name:	Cayman Chemic	al Company				
Emergency Contact:		ithin USA and Ca	anada: +1 (800)424-9300			
Alternate Emergency Contact:		utside USA and C				
Information:	Cayman Chemic		+1 (734)971-3335			
Web site address:	www.caymanch					
	-					
	1		entification			
GHS Classification	Placard Exclamation	Key word Warning	GHS hazard phrase			
Serious Eye Damage/Eye Irritation, Category 2A	point	warning	Causes serious eye irritation			
Skin Sensitization, Category 1	Exclamation point	Warning	May cause an allergic skin reaction			
GHS Hazard Phrases:		erious eye irritatio e an allergic skin				
GHS Precaution Phrases:	 P264: Wash hands thoroughly after handling. P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority. P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P272: Contaminated work clothing should not be allowed out of the workplace. 					
GHS Response Phrases:	sponse Phrases:P362+364: Take off contaminated clothing and wash it before reuse.sponse Phrases:P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove cont lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P302+352: IF ON SKIN: Wash with plenty of soap and water. P333+313: If skin irritation or rash occurs, seek medical advice/attention.					
GHS Storage and Disposal Phrases:	Please refer to S	ection 7 for Stora	ge and Section 13 for Disposal information.			
2.3 Adverse Human Health Effects and Symptoms:	 Please refer to Section 7 for Storage and Section 13 for Disposal information. Causes serious eye irritation. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause an allergic skin reaction. May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated. 					
Target Organs:	No data availabl	e.				
LD 50 / LC 50:	Please refer to S	ection 11.				
Medical Conditions Generally Aggravated By Exposure:	No data availabl	e.				



Revision: 05/02/2013 Supercedes Revision: 09/13/2012

Hazar	dous Components (Chemical Name)	CAS #		EC#	Risk Phrases	RTECS #		
	blyoxyethylene (20) sorbitan monolaurate	9005-64-5	100.0 %	500-018-3	Risk Phrases	TR7400000		
	ween 20™)							
		Section 4.	First Aid Me	easures				
4.1	Description of First Aid Measures:							
4.1.1	In Case of Inhalation:Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.							
4.1.2	In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.						
4.1.3	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.						
4.1.4	In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.						
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	No data available						
4.3 atten	Indication of any immediate medical tion and special treatment needed:	No data available	».					
	Se	ction 5. Fi	re Fighting	Measures				
5.1	Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.						
	Unsuitable Extinguishing Media:	A solid water stream may be inefficient.						
5.2	Flammable Properties and Hazards:	No data available.						
	Flash Pt:	No data.						
	Autoignition Pt:	No data available.						
	Explosive Limits:	LEL: No data. UEL: No data.						
	Hazardous Combustion Products:	No data available.						
5.3	Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.						
	Sectio	n 6. Accid	ental Relea	se Measure	es			
6.1 Equiț	Protective Precautions, Protective pment and Emergency Procedures:	As conditions wa		H approved self-con	ventilation. ntained breathing appar y goggles, and heavy ru	-		
6.2	Environmental Precautions:	Take steps to avo	id release into the e	environment, if safe	to do so.			
6.3 Conta	Methods and Material For ainment and Cleaning Up:	-	collect, as appropri mical waste contain		cordance with local reg	gulations.		
	Se	ection 7. H	andling and	d Storage				
7.1		Avoid prolonged or repeated exposure. Keep container tightly closed. Store in accordance with information listed on the product insert.						
7.1 7.2	Precautions To Be Taken in Storing:	Keep container ti		n listed on the produ	ict insert.			

Multi-region format



Revision: 05/02/2013 Supercedes Revision: 09/13/2012

Section 8.	Exposure	Controls/Person	al Protection			
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits		
 Polyoxyethylene (20) sorbitan monolaurate (Tween 20[™]) 	9005-64-5	No data.	No data.	No data.		
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe		
 Polyoxyethylene (20) sorbitan monolaurate (Tween 20[™]) 	9005-64-5	No data.	No data.	No data.		
Protective Equipment Summary - Hazard Label Information:	•	c	wash station in work area	Lab coat Safety		
8.2.1 Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.					
8.2.2.1 Eye Protection:	Safety glasses					
8.2.2.2 Protective Gloves:	Compatible chemical-resistant gloves					
Other Protective Clothing:	Lab coat					
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	respirator, as conditions wa	arrant.			
Work/Hygienic/Maintenance Practices:	Do not take intern Facilities storing safety shower. Wash thoroughly	or utilizing this material sho	ould be equipped with an eyev	wash facility and a		
8.2.3 Environmental Exposure Controls:	No data available					
Section	9. Physica	al and Chemical	Properties			
9.1 Information on Basic Physical and Ch	emical Properties					
Physical States:	[]Gas [X]	Liquid [] Solid				

	-
Appearance and Odor:	A clear, yellow viscous liquid
Melting Point:	No data.
Boiling Point:	No data.
Flash Pt:	No data.
Evaporation Rate:	No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	No data.
Solubility in Water:	No data.
Autoignition Pt:	No data.
Explosive Properties:	No data available.
Oxidizing Properties:	No data available.
9.2 Other Information	
Percent Volatile:	N.A.

 Section 10. Stability and Reactivity

 10.1
 Reactivity:
 No data available.

 10.2
 Stability:
 Unstable [] Stable [X]

 10.3
 Stability Note(s):
 Stable if stored in accordance with information listed on the product insert.

 10.4
 Conditions To Avoid:
 No data available.



Supercedes Revision: 09/13/2012

				Supercedes Rev	ision: 09/13/2012		
10.3 Polymerization:	Will occur []	Will not occur [2	X]				
10.5 Incompatibility - Materials To Avoid:	strong oxidizing a	agents					
10.6 Hazardous Decomposition Or	carbon dioxide						
Byproducts: carbon monoxide							
Sec	tion 11. To	xicological	Information				
11.1 Information on Toxicological Effects:	The toxicological	effects of this prod	luct have not been th	oroughly studied.			
Chronic Toxicological Effects:	Oral LD50 (mous Polysorbate 20 - 1 Only select Regis See actual entry i	e): >33 g/kg; Irritat	tion Data: Skin (hun morigen and reprodu s of Chemical Substa lete information.	/kg; Oral LD50 (hams nan): 15 mg/3D mild; nctive effector. nnces (RTECS) data is			
lazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA		
. Polyoxyethylene (20) sorbitan monolaurate (Tween 20 [™])	9005-64-5	n.a.	n.a.	n.a.	n.a.		
Carcinogenicity:	NTP? No IA	RC Monographs? I	No OSHA Regu	ilated? No			
Se	ction 12. E	cological In	formation				
12.1 Toxicity:	Avoid release into	o the environment.					
	Runoff from fire	control or dilution	water may cause pol	lution.			
Sec	tion 13. Dis	sposal Con	siderations				
13.1 Waste Disposal Method:	Dispose in accord	lance with local, sta	ate, and federal regul	ations.			
Se	ection 14. T	ransport In	formation				
14.1 LAND TRANSPORT (US DOT)		·					
DOT Proper Shipping Name	Not dangerous go	ods.					
14.1 LAND TRANSPORT (European ADR/RI	D)						
ADR/RID Shipping Name	Not dangerous go	oods.					
14.3 AIR TRANSPORT (ICAO/IATA)							
ICAO/IATA Shipping Name	Not dangerous go	ods.					
Additional Transport Information:	Transport in acco	rdance with local, s	state, and federal reg	ulations.			
Se	ction 15. R	egulatory Ir	formation				
European Community Hazard Symbol codes	Xi: Irritant						
European Community Risk and Safety Phrase	S						
 R36 - Irritating to eyes. R43 - May cause sensitization by skin c S24/25 - Avoid contact with skin and eye S26 - In case of contact with eyes, rinse S36/37/39 - Wear suitable protective clothin 	s. immediately with ple	-	medical advice.				
	CV6 #	Sec 202 (EUS)	Soc 204 BO	Soc 242 /TDI	Sec.110		
Hazardous Components (Chemical Name) . Polyoxyethylene (20) sorbitan monolaurate	CAS # 9005-64-5	Sec.302 (EHS) No	Sec.304 RQ No	Sec.313 (TRI) No	No		
(Tween 20™)							
Other US EPA or State Lists							
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.6		
I. Polyoxyethylene (20) sorbitan monolaurate	9005-64-5	No	No	Inventory	No		



Multi-region format

Revision: 05/02/2013

Supercedes Revision: 09/13/2012

Regulatory Information Statement:

This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

Section 16. Other Information

Revision Date:

05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



1.1

1.2

SAFETY DATA SHEET **EIA Tracer Dye**

Revision: 05/02/2013

Supercedes Revision: 03/26/2013 Section 1. Identification of the Substance/Mixture and of the 400040 EIA Tracer Dye Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses:

Product Code:

Product Name:

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108

For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Shee	1.3	Details of the Supplier of the Safety Data Shee
---	-----	---

Company Name:	Cayman Chemical Company	
Emergency Contact:	CHEMTREC Within USA and Canada:	+1 (800)424-9300
Alternate Emergency Contact:	CHEMTREC Outside USA and Canada:	+1 (703)527-3887
Information:	Cayman Chemical Company +	1 (734)971-3335
Web site address:	www.caymanchem.com	

Section 2. Hazards Identification

GHS Classification	Placard	Key word	GHS hazard phrase		
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation		
Skin Corrosion/Irritation, Category 2	Exclamation point	Warning	Causes skin irritation		
	H319: Causes se H315: Causes sk	rious eye irritation	n		
GHS Precaution Phrases:	P264: Wash han P280: Wear prot	ds thoroughly afte	hing and eye/face protection as specified by the		
	 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P302+352: IF ON SKIN: Wash with plenty of soap and water. P332+313: If skin irritation occurs, get medical advice/attention. P362: Take off contaminated clothing and wash before re-use. 				
GHS Storage and Disposal Phrases:	Please refer to Section 7 for Storage and Section 13 for Disposal information.				
Symptoms:	 Causes skin and serious eye irritation. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause burns. May cause respiratory system irritation. May temporarily stain skin. To the best of our knowledge, the toxicological properties have not been thoroughly investi 				
Target Organs:	No data available	e.			
Medical Conditions Generally Aggravated By Exposure:					



SAFETY DATA SHEET EIA Tracer Dye

Revision: 05/02/2013 Supercedes Revision: 03/26/2013

lazardous Components (Chemic		CAS #		EC#	Risk Phrases
. EIA Tracer Dye		NA	100.0 %	NA	R36/38
	S	ection 4	First Aid Me		
4.1 Description of First Aid M					
4.1.1 In Case of Inhalation:		Pamova to frash	air. If not broathing	give ortificial	respiration or give oxygen by trained
	p	ersonnel. Get im	mediate medical at	tention.	
4.1.2 In Case of Skin Contact:		•			r for at least 20 minutes. Remove ptoms occur. Wash clothing before reuse.
4.1.3 In Case of Eye Contact:			t and flush eyes wi ted by medical pers		er for at least 20 minutes. Have eyes
4.1.4 In Case of Ingestion:	u		on. Get medical atte	-	cious. Never give anything by mouth to an induce vomiting unless directed to do so b
4.2 Important Symptoms and Both Acute and Delayed:	Effects, N	No data available			
4.3 Indication of any immedia attention and special treatment		No data available			
	Sec	tion 5. Fi	re Fighting	Measures	3
5.1 Suitable Extinguishing Me			tant foam, carbon d to cool fire-exposed		r dry chemical spray.
Unsuitable Extinguishing	Media: A	A solid water stre	eam may be ineffici	ent.	
5.2 Flammable Properties and	Hazards: N	No data available			
Flash Pt:	Ν	No data.			
Autoignition Pt:	Ν	No data available			
Explosive Limits:	I	LEL: No data.		UEL: No data	
Hazardous Combustion P	roducts: N	No data available			
5.3 Fire Fighting Instructions		-			us pressure-demand (NIOSH approved or ct with skin and eyes.
	Section	6. Accid	ental Relea	se Measi	ures
6.1 Protective Precautions, P Equipment and Emergency Proc	edures: A	As conditions wa		H approved self	ation. -contained breathing apparatus, or respirato afety goggles, and heavy rubber gloves).
6.2 Environmental Precaution	is:]	Take steps to avo	id release into the e	nvironment, if s	safe to do so.
6.3 Methods and Material For Containment and Cleaning Up:		-	collect, as appropri mical waste contain		n accordance with local regulations.
	Sec	ction 7. H	andling and	Storage	
7.1 Precautions To Be Taken		-	dust/fume/gas/mist/ or repeated exposu		
7.2 Precautions To Be Taken		Keep container ti Store in accordan	ghtly closed. ce with information	listed on the p	roduct insert.
Hazard Label Information:		Avoid contact wi Wash thoroughly	•	Do not reuse th	is container. Use with adequate ventilation

Multi-region format



SAFETY DATA SHEET EIA Tracer Dye

Revision: 05/02/2013 upercedes Revision: 03/26/2013

Section 8. Exposure Controls/Personal Protection				
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. EIA Tracer Dye	NA	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. EIA Tracer Dye	NA	No data.	No data.	No data.
Protective Equipment Summary - Hazard Label Information:	-	nical-resistant gloves shower in work area	-	Lab coat Safety
8.2.1 Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborn levels below recommended exposure limits.			
8.2.2.1 Eye Protection:	Safety glasses			
8.2.2.2 Protective Gloves:	Compatible chem	nical-resistant gloves	S	
Other Protective Clothing:	Lab coat			
8.2.2.3 Respiratory Equipment (SpecifyNIOSH approved respirator, as conditions warrant.Type):				
Work/Hygienic/Maintenance Practices:	Do not take inter Facilities storing safety shower. Wash thoroughly	or utilizing this mat	erial should be equipped with an eye	ewash facility and a
8.2.3 Environmental Exposure Controls:	No data available	2.		
Section	9. Physica	al and Chem	nical Properties	
9.1 Information on Basic Physical and Che	emical Properties			
Physical States:	[] Gas [X]	Liquid [] Soli	d	
Appearance and Odor:	A red solution			
Melting Point:	No data.			
Boiling Point:	No data.			
Flash Pt:	No data.			
Evaporation Rate:	No data.			
Vapor Pressure (vs. Air or mm Hg):	No data.			
Vapor Density (vs. Air = 1):	No data.			
Specific Gravity (Water = 1):	No data.			
Solubility in Water:	No data.			
Autoignition Pt:	No data.			
Explosive Properties:	No data available			
Oxidizing Properties:	No data available	ð.		
9.2 Other Information				

Percent Volatile:

No data.

Section 10. Stability and Reactivity

10.1	Reactivity:	No data available.
10.2	Stability:	Unstable [] Stable [X]
10.3	Stability Note(s):	Stable if stored in accordance with information listed on the product insert.
10.4	Conditions To Avoid:	No data available.
10.3	Polymerization:	Will occur [] Will not occur [X]



SAFETY DATA SHEET EIA Tracer Dye

Supercedes Revision: 03/26/2013

10.5 Incompatibility - Materials To Avoid:	No data available	2.			
10.6 Hazardous Decomposition Or Byproducts:	No data available	2.			
Sec	tion 11. To	xicological I	nformation		
11.1 Information on Toxicological Effects:	The toxicologica	l effects of this prod	uct have not been th	oroughly studied.	
Chronic Toxicological Effects: No data available.					
Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. EIA Tracer Dye	NA		n.a.	n.a.	n.a.
Carcinogenicity:	NTP? No IA	ARC Monographs? N	lo OSHA Regu	ilated? No	
Se	ection 12. E	cological In	formation		
12.1 Toxicity:	Avoid release int	to the environment.			
	Runoff from fire	control or dilution v	vater may cause poll	lution.	
Sec	ction 13. Di	sposal Cons	siderations		
13.1 Waste Disposal Method:	Dispose in accord	dance with local, sta	te, and federal regul	ations.	
S	ection 14. 7	ransport Inf	ormation		
14.1 LAND TRANSPORT (US DOT)					
DOT Proper Shipping Name	Not dangerous ge	oods.			
14.1 LAND TRANSPORT (European ADR/R	ID)				
ADR/RID Shipping Name	Not dangerous ge	pods.			
14.3 AIR TRANSPORT (ICAO/IATA)					
ICAO/IATA Shipping Name	Not dangerous ge	oods.			
Additional Transport Information:	Transport in acco	ordance with local, s	tate, and federal reg	ulations.	
Se	ction 15. R	egulatory In	formation		
European Community Hazard Symbol codes		<u> </u>			
European Community Risk and Safety Phrase	es				
R36/38 - Irritating to eyes and skin.					
S24/25 - Avoid contact with skin and eye		antry of water and coals	madical advice		
S26 - In case of contact with eyes, rinso S36/37/39 - Wear suitable protective clothi			medical advice.		
US EPA SARA Title III					
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. EIA Tracer Dye	NA	No	No	No	No
Other US EPA or State Lists		1	1		
Hazardous Components (Chemical Name) 1. EIA Tracer Dye	CAS #	CAA HAP,ODC	CWA NPDES	TSCA No	CA PROP.65
Regulatory Information Statement:			-	.1200, Regulation (EC	-
	-	rective 67/548/EEC		.1200, Regulation (EC	2) 110.1272/2000,
	Section 16	Other Infor	motion		
		. Other Infor	mation		
Revision Date:	05/02/2013				
Company Policy or Disclaimer					
For research use only, not for human or veter DISCLAIMER: This information is believed	•	presents the best inform	nation currently availa	ble to us However we r	nake no warranty of
merchantability or any other warranty, expre		-	-		-
make their own investigations to determine the	he suitability of the ir	nformation for their par	ticular purposes.		
N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required					

Multi-region format



Revision: 05/02/2013 Supercedes Revision: 05/01/2012

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Ider	ntification of	the Substar	nce/Mixture a	nd of the	
1.1 Product Code:	400042				
Product Name:	EIA Antiserum D	EIA Antiserum Dye			
1.2 Relevant identified uses of the substa	nce or mixture and	e or mixture and uses advised against			
Relevant identified uses:	For research use	For research use only, not for human or veterinary use.			
1.3 Details of the Supplier of the Safety Da		•			
Company Name: Cayman Chemical Company					
Emergency Contact:	-	thin USA and Canad	a: +1 (800)424-9	9300	
Alternate Emergency Contact:		tside USA and Cana			
Information:	Cayman Chemica		+1 (734)971-3335		
Web site address:	www.caymanche				
	ection 2. H	azards Iden			
GHS Classification	Placard	Key word	GHS hazard phrase		
Carcinogenicty, Category 2	Health hazard	Warning	Suspected of causing		
Toxic To Reproduction, Category 2 GHS Hazard Phrases:	Health hazard	of causing cancer.	Suspected of damag	ing fertility or the unborn child	
Ono nazaru Filiases.	•	e e	or the unborn child.		
GHS Precaution Phrases:	P201: Obtain special instructions before use.P202: Do not handle until all safety precautions have been read and understood.P281: Use personal protective equipment as required.				
GHS Response Phrases:	P308+313: IF exp	posed or concerned:	Get medical attention/	advice.	
GHS Storage and Disposal Phrases:	Please refer to Se	ction 7 for Storage a	nd Section 13 for Disp	oosal information.	
2.3 Adverse Human Health Effects and Symptoms:					
Target Organs:	No data available				
LD 50 / LC 50:	Please refer to Se	ction 11.			
Medical Conditions Generally Aggravated By Exposure:	 No data available 				
Section 3.	Compositi	on/Informatio	on on Ingredi	ents	
Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	
1. EIA Antiserum Dye	NA	100.0 %	NA	R45-62-63	

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

4.1.1 In Case of Inhalation:

Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.



Revision: 05/02/2013 percedes Revision: 05/01/2012

		Supercedes Revision: 05/01/2012	
4.1.2	In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.	
4.1.3	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.	
4.1.4	In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.	
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	No data available.	
4.3	Indication of any immediate medical	No data available.	
atten	tion and special treatment needed:		
atten	•	ection 5. Fire Fighting Measures	
5.1	•	ection 5. Fire Fighting Measures Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.	
	Se	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.	
	Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.	
5.1	Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. A solid water stream may be inefficient.	
5.1	Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. A solid water stream may be inefficient. No data available.	
5.1	Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards: Flash Pt:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. A solid water stream may be inefficient. No data available. No data.	
5.1	Suitable Extinguishing Media: Unsuitable Extinguishing Media: Flammable Properties and Hazards: Flash Pt: Autoignition Pt:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers. A solid water stream may be inefficient. No data available. No data. No data available.	

This in any file, wear sen contained oreatining upparatus pressure demand (reost) up
equivalent), and full protective gear to prevent contact with skin and eyes.

	Section 6. Accidental Release Measures				
6.1 Protective Precautions, ProtectiveAvoid breathing vapors and provide adequate ventilation.Equipment and Emergency Procedures:As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respand appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves)					
6.2	Environmental Precautions:	Take steps to avoid release into the environment, if safe to do so.			
6.3 Cont	6.3 Methods and Material ForContain spill and collect, as appropriate.Containment and Cleaning Up:Transfer to a chemical waste container for disposal in accordance with local regulations.				
	Section 7. Handling and Storage				
	S	ection 7. Handling and Storage			
7.1	S Precautions To Be Taken in Handling:				
7.1 7.2		Avoid breathing dust/fume/gas/mist/vapours/spray.			

Section 8. Exposure Controls/Personal Protection				
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. EIA Antiserum Dye	NA	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. EIA Antiserum Dye	NA	No data.	No data.	No data.
Protective Equipment Summary - Hazard Label Information: 8.2.1 Engineering Controls (Ventilation	ation: glasses Safety shower in work area Vent Hood			5
etc.):	levels below reco	mmended exposure limits.		



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8.2.2.1 Eye Protection:	Safety glasses
8.2.2.2 Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.
8.2.3 Environmental Exposure Controls:	No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties		
Physical States:	[] Gas [X] Liquid [] Solid	
Appearance and Odor:	A blue solution	
Melting Point:	No data.	
Boiling Point:	No data.	
Flash Pt:	No data.	
Evaporation Rate:	No data.	
Vapor Pressure (vs. Air or mm Hg):	No data.	
Vapor Density (vs. Air = 1):	No data.	
Specific Gravity (Water = 1):	No data.	
Solubility in Water:	No data.	
Autoignition Pt:	No data.	
Explosive Properties:	No data available.	
Oxidizing Properties:	No data available.	
9.2 Other Information		
Percent Volatile:	No data.	
S	ection 10. Stability and Reactivity	

	Section 10. Stability and Reactivity		
10.1	Reactivity:	No data available.	
10.2	Stability:	Unstable [] Stable [X]	
10.3	Stability Note(s):	Stable if stored in accordance with information listed on the product insert.	
10.4	Conditions To Avoid:	No data available.	
10.3	Polymerization:	Will occur [] Will not occur [X]	
10.5	Incompatibility - Materials To Avoid:	strong oxidizing agents	
10.6	Hazardous Decomposition Or	No data available.	
Bypro	oducts:		

Section 11. Toxicological Information

ſ	11.1 Information on Toxicological Effects	: The toxicological effects of this product have not been thoroughly studied.			
	Chronic Toxicological Effects:	Contains a component that has been investigated as a carcinogen.			
	Carcinogenicity/Other Information:	Contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.			



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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA	
1. EIA Antiserum Dye	NA	n.a.	n.a.	n.a.	n.a.	
-	NTP? No IA	RC Monographs? Y	es OSHA Regu	ilated? No		
Sec	tion 12 E	cological In	formation			
		the environment.	Ionnation			
			vater may cause poll	ution.		
Sect	Section 13. Disposal Considerations					
13.1 Waste Disposal Method:	13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.					
Section 14. Transport Information						
14.1 LAND TRANSPORT (US DOT)						
DOT Proper Shipping Name	Not dangerous go	oods.				
14.1 LAND TRANSPORT (European ADR/RID)					
ADR/RID Shipping Name	Not dangerous go	oods.				
14.3 AIR TRANSPORT (ICAO/IATA)						
ICAO/IATA Shipping Name	Not dangerous go	ods.				
Additional Transport Information:	Transport in acco	rdance with local, st	tate, and federal reg	ulations.		
Sec	tion 15. R	egulatory In	formation			
European Community Hazard Symbol codes	T: Toxic; Carcino	ogenic Hazard: 2; R	eproductive Hazard	: 3		
European Community Risk and Safety Phrases						
R45 - May cause cancer.						
R62 - Risk of impaired fertility.						
R63 - Possible risk of harm to the unborn	child					
S24/25 - Avoid contact with skin and eyes.	enna.					
S36/37/39 - Wear suitable protective clothing	, gloves and eye/fa	ce protection.				
S45 - In case of accident or if you feel un			now the label wheneve	r possible.)		
S53 - Avoid exposure - obtain special inst	tructions before use					
US EPA SARA Title III						
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110	
1. EIA Antiserum Dye Other US EPA or State Lists	NA	No	No	No	No	
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65	
1. EIA Antiserum Dye	NA	No	No	No	No	
		pared in accordance	e with 29 CFR 1910	.1200, Regulation (EC)	No.1272/2008,	
	and European Di	rective 67/548/EEC	as amended.			
S	Section 16.	Other Infor	mation			
Revision Date:	05/02/2013					
Company Policy or Disclaimer						
For research use only, not for human or veterin	ary use.					
DISCLAIMER: This information is believed to	be accurate and rep	presents the best inform	nation currently availa	ble to us. However, we ma	ke no warranty of	
merchantability or any other warranty, express	or implied, with res	pect to such information	on, and we assume no	liability resulting from its	ase. Users should	
make their own investigations to determine the	suitability of the in	formation for their par	ticular purposes.			
N.A.=Not available, N.P.=Not applicable, N.D.	=Not determined, N	N.E.=Not established, I	N.R.=Not required			



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Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Ident	ntification of the Substance/Mixture and of the				
1.1 Product Code:	400050				
Product Name:	Ellman's Reagent				
1.2 Relevant identified uses of the substance	-		ainst		
Relevant identified uses:	For research use	only, not for hum	an or veterinary use.		
1.3 Details of the Supplier of the Safety Data					
	Cayman Chemica	al Company			
	-	thin USA and Car	nada: +1 (800)424-9300		
		tside USA and Ca			
	Cayman Chemica		+1 (734)971-3335		
Web site address:	www.caymanche	m.com			
Se	ction 2. H	lazards Ide	entification		
GHS Classification	Placard	Key word	GHS hazard phrase		
Acute Toxicity: Oral, Category 3	Skull and crossbones	Danger	Toxic if swallowed		
Acute Toxicity: Skin, Category 3	Skull and	Danger	Toxic in contact with skin		
Skin Corrosion/Irritation, Category 2	crossbones Exclamation	Warning	Causes skin irritation		
Skin Conosion/Initation, Category 2	point	warning			
Serious Eye Damage/Eye Irritation, Category 1	Corrosive	Danger	Causes serious eye damage		
Target Organ Systemic Toxicity (single	Exclamation	Warning	May cause respiratory irritation,or may cause drowsines		
exposure), Category 3			and dizziness		
	H301: Toxic if sy H311: Toxic in c				
	H311: Toxic in contact with skin. H315: Causes skin irritation.				
	H318: Causes serious eye damage.				
	H335: May cause	e respiratory irritat	tion.		
	P264: Wash hands thoroughly after handling.				
	P280: Wear protective gloves/clothing and eye/face protection as specified by the				
	manufacturer/supplier or the competent authority.				
	P361+364: Take off immediately all contaminated clothing and wash it before reuse. P362+364: Take off contaminated clothing and wash it before reuse.				
	P261: Avoid breathing dust/fume/gas/mist/vapours/spray.				
GHS Response Phrases:	P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.				
	P330: Rinse mouth.				
	P302+352: IF ON SKIN: Wash with plenty of soap and water.				
	P312: Call a POISON CENTER or doctor/physician if you feel unwell.				
	P321: Specific treatment (see on this label) reference to supplemental first aid instruction immediate administration of antidote is required.				
			, get medical advice/attention.		
			e cautiously with water for several minutes. Remove contact		
		and easy to do. Co			
			CENTER or doctor/physician.		
			ER or doctor/physician if exposed or you feel unwell.		
		HALED: Remove	e victim to fresh air and keep at rest in a position comfortabl		
	for breathing.				



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GHS Storage and Disposal Phrases:	Please refer to Section 7 for Storage and Section 13 for Disposal information.						
Gho Glorage and Disposal Thrases.	Please refer to Section 7 for Storage and Section 15 for Disposal information.						
2.3 Adverse Human Health Effects and	Causes serious eye damage. Causes skin and respiratory system irritation.						
Symptoms:							
	Material is irritating to the mucous membranes and upper respiratory tract.						
	May be harmful by inhalation.						
	Toxic if swallowed or in contact with skin.						
	To the best of our knowledge, the toxicological properties have not been thoroughly investigated.						
Target Organs:	No data available.						
LD 50 / LC 50:	Please refer to Section 11.						
Medical Conditions Generally Aggravated By	No data available.						

Exposure:

Section 3. Composition/Information on Ingredients					
Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. DTNB	69-78-3 1.0 -5.0 % 200-714-4 R36/37/38 DG965				DG9650000
2. Acetylthiocholine iodide	1866-15-5	1.0 -5.0 %	217-474-1	R24/25-36/37/38	FZ9865000
3. Sodium chloride	7647-14-5	5.0 -10.0 %	231-598-3	R36	VZ4725000
4. Potassium phosphate, dibasic	7758-11-4	45.0 -55.0 %	231-834-5	R41	TC5580000
5. Potassium phosphate, Monobasic	7778-77-0	35.0 -45.0 %	231-913-4	No phrases apply.	TC6615500
ç	Section 4.	First Aid Me	easures		
4.1 Description of First Aid Measures:					
4.1.1 In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.				
4.1.2 In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.				
4.1.3 In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.				
4.1.4 In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.				
4.2 Important Symptoms and Effects, Ingestion of large amounts can cause abdominal pain, lowered blood pressure, nausea, and vomiting.			ausea, and		
4.3 Indication of any immediate medical attention and special treatment needed:	No data available		4.3 Indication of any immediate medical No data available.		

	Section 5. Fire Fighting Measures							
5.1	5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.							
		Use water spray to cool fire-exposed containers.						
	Unsuitable Extinguishing Media:	A solid water stream may be inefficient.						
5.2	Flammable Properties and Hazards:	No data available.						
	Flash Pt:	No data.						
	Autoignition Pt:	No data available.						
	Explosive Limits:	LEL: No data. UEL: No data.						
	Hazardous Combustion Products:	No data available.						
5.3	Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.						



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7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5	No data. No data. No data. Britain EH40 No data.	No data. No data. No data. France VL	No data. No data. No data. Europe	
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69-78-3 1866-15-5	No data.		· ·	
1866-15-5		No data.	No data.	
	ino data.	Nie dete		
		No data.	No data.	
7647-14-5	1	No data. No data.	No data.	
7758-11-4		No data.	No data.	
		Eye wash station in work area		
		Vent Hood	a Labeoat Safety	
-			a controls to control sirbor	
	similaria exposure im			
Compatible chemical-resistant gloves				
Lab coat				
I approved	d respirator, as condition	ns warrant.		
Do not take internally.				
Facilities storing or utilizing this material should be equipped with an eyewash facility and a				
safety shower.				
horoughly	after handling.			
a available	2.			
hysica	al and Chemic	al Properties		
roperties				
us []I	Liquid [X] Solid			
-	. –			
	elow reco glasses tible chen at I approved take inter es storing shower. horoughly a available hysica operties	below recommended exposure lin glasses tible chemical-resistant gloves at I approved respirator, as condition take internally. es storing or utilizing this materia shower. horoughly after handling. a available. hysical and Chemic operties	tible chemical-resistant gloves at I approved respirator, as conditions warrant. take internally. es storing or utilizing this material should be equipped with an shower. horoughly after handling. a available. hysical and Chemical Properties operties	



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					Supercedes Re	vision: 05/01/2012	
Appea	arance and Odor:	A lyophilized pov	wder				
Meltir	g Point:	No data.					
Boilin	g Point:	No data.					
	Flash Pt:	No data.					
Evapo	oration Rate:	No data.					
Vapor	Pressure (vs. Air or mm Hg):	No data.					
Vapor	Density (vs. Air = 1):	No data.					
Speci	fic Gravity (Water = 1):	No data.					
Solub	ility in Water:	No data.					
	Autoignition Pt:	No data.					
Explo	sive Properties:	No data available	e.				
Oxidia	zing Properties:	No data available	e.				
9.2	Other Information						
Perce	nt Volatile:	No data.					
	Se	ction 10. S	tability and	Reactivitv			
10.1	Reactivity:	No data available	-	- 7			
10.2	Stability:	Unstable []	Stable [X]				
10.3	Stability Note(s):	Stable if stored in accordance with information listed on the product insert.					
10.4	Conditions To Avoid:	No data available.					
10.3	Polymerization:	Will occur [] Will not occur [X]					
10.5	Incompatibility - Materials To Avoid:	strong bases					
		strong oxidizing	agents				
10.6	Hazardous Decomposition Or	carbon dioxide					
Bypro	oducts:	carbon monoxide					
		hydrogen chloride gas hydrogen iodide					
		nitrogen oxides					
		phosphorus oxide	es				
		potassium oxides					
		sodium oxides					
		sulfur oxides					
	Sec	tion 11. To	xicological I	nformatior	1		
11.1	Information on Toxicological Effects:	The toxicological	l effects of this prod	uct have not been	thoroughly studied.		
		Acetylthiocholine iodide - Toxicity Data: Oral LD50 (rat): 100 mg/kg; Skin LD50 (guinea pig):					
		500 mg/kg;					
		D	–				
		Potassium phospl (rabbit): >4,640 r		oxıcıty Data: Oral	LDLO (rat): 4,640 mg	/kg; Skin LD50	
Chror	ic Toxicological Effects:			of Chemical Sub	stances (RTECS) data	s presented here	
01101	ine realitionogical Energies.		in RTECS for comp		stances (IVIECS) uala	s presenteu nere.	
			e iodide RTECS Nu)		
		-	hate, monobasic RT				
Hazaro	lous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA	
	NB	69-78-3	Ì				



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Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
2. Acetylthiocholine iodide	1866-15-5	n.a.	n.a.	n.a.	n.a.
3. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
 Potassium phosphate, dibasic 	7758-11-4	n.a.	n.a.	n.a.	n.a.
5. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
Carcinogenicity:	NTP? No IA	RC Monographs? N	lo OSHA Regu	lated? No	
Sec	tion 12. E	cological In	formation		
12.1 Toxicity:	Avoid release into	the environment.			
	Runoff from fire	control or dilution v	vater may cause poll	lution.	
Sect	ion 13. Dis	sposal Cons	siderations		
13.1 Waste Disposal Method:	Dispose in accord	ance with local, sta	te, and federal regul	ations.	
See	ction 14. T	ransport Inf	formation		
14.1 LAND TRANSPORT (US DOT)					
DOT Proper Shipping Name	Not dangerous go	ods.			
14.1 LAND TRANSPORT (European ADR/RID)				
ADR/RID Shipping Name	Not dangerous go	ods.			
14.3 AIR TRANSPORT (ICAO/IATA)	tiot dangerous go	ous.			
	NT / 1	1			
	Not dangerous go				
Additional Transport Information:	Transport in acco	rdance with local, s	tate, and federal reg	ulations.	
Sec	tion 15. R	egulatory In	formation		
European Community Hazard Symbol codes	T: Toxic				
European Community Risk and Safety Phrases					
R24/25 - Toxic in contact with skin and if s					
R37/38 - Irritating to respiratory system and					
R41 - Risk of serious damage to the eyes.					
S24/25 - Avoid contact with skin and eyes.	1. 4 1 41 1		1. 1 1.		
S26 - In case of contact with eyes, rinse in S36/37/39 - Wear suitable protective clothing	• •	•	medical advice.		
US EPA SARA Title III	, gio reo and eyeria	e protectioni			
lazardous Components (Chemical Name)	CAS#	Sec. 302 (FHS)	Sec.304 RQ	Sec. 313 (TRI)	Sec 110
	CAS # 69-78-3	Sec.302 (EHS) No	Sec.304 RQ	Sec.313 (TRI)	Sec.110
. DTNB	CAS # 69-78-3 1866-15-5	. ,			
DTNB Acetylthiocholine iodide	69-78-3	No	No	No	No
DTNB Acetylthiocholine iodide Sodium chloride	69-78-3 1866-15-5	No No	No No	No No	No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic	69-78-3 1866-15-5 7647-14-5	No No No	No No No	No No No	No No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic	69-78-3 1866-15-5 7647-14-5 7758-11-4	No No No	No No No No	No No No No	No No No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists	69-78-3 1866-15-5 7647-14-5 7758-11-4	No No No	No No No No	No No No No	No No No No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name)	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0	No No No No	No No No No No No	No No No No No No	No No No No No
 DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB 	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS #	No No No No No CAA HAP,ODC No	No No No No No CWA NPDES	No No No No No TSCA	No No No No No CA PROP.6
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3	No No No No No CAA HAP,ODC No	No No No No No CWA NPDES No	No No No No No TSCA Inventory	No No No No No CA PROP.6 No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5 7647-14-5 7758-11-4	No No No No CAA HAP,ODC No No	No No No No No CWA NPDES No No	No No No No No TSCA Inventory Inventory	No No No No No CA PROP.6 No
 Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic 	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5 7647-14-5	No No No No CAA HAP,ODC No No No	No No No No CWA NPDES No No No	No No No No No TSCA Inventory Inventory Inventory	No No No No No CA PROP.6 No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, dibasic Potassium phosphate, Monobasic Regulatory Information Statement:	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5 7647-14-5 7758-11-4 7758-11-4 7778-77-0 This SDS was pre-	No No No No CAA HAP,ODC No No No No No No No No No	No No No No No CWA NPDES No e with 29 CFR 1910	No No No No No TSCA Inventory Inventory Inventory Inventory Inventory	No No No No No No CA PROP.6 No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, dibasic Potassium phosphate, Monobasic Regulatory Information Statement:	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5 7647-14-5 7758-11-4 7758-11-4 7778-77-0 This SDS was pre-	No No No No No No CAA HAP,ODC No No	No No No No No CWA NPDES No e with 29 CFR 1910	No No No No No TSCA Inventory Inventory	No No No No No No CA PROP.6 No No
DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, Monobasic Other US EPA or State Lists Hazardous Components (Chemical Name) DTNB Acetylthiocholine iodide Sodium chloride Potassium phosphate, dibasic Potassium phosphate, dibasic Potassium phosphate, Monobasic Regulatory Information Statement:	69-78-3 1866-15-5 7647-14-5 7758-11-4 7778-77-0 CAS # 69-78-3 1866-15-5 7647-14-5 7758-11-4 7758-11-4 7778-77-0 This SDS was pre-	No No No No CAA HAP,ODC No No No No No No No No No	No No No No No CWA NPDES No e with 29 CFR 1910	No No No No No TSCA Inventory Inventory	No No No No No No CA PROP.6 No No



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Section 16. Other Information

05/02/2013

Revision Date:

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required



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Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Identification of the Substance/Mixture and of the						
1.1 Product Code:	400060					
Product Name:	EIA Buffer Cond	centrate (10X)				
1.2 Relevant identified uses of the substan			nainst			
Relevant identified uses:			-			
	For research use only, not for human or veterinary use.					
1.3 Details of the Supplier of the Safety Dat						
Company Name:	Cayman Chemic					
Emergency Contact:	CHEMTREC W	ithin USA and Ca	nada: +1 (800)424-9300			
Alternate Emergency Contact:	CHEMTREC Ou	utside USA and C	anada: +1 (703)527-3887			
Information:	Cayman Chemic	al Company	+1 (734)971-3335			
Web site address:	www.caymanche	em.com				
Se	ection 2. F	lazards Ide	entification			
GHS Classification	Placard	Key word	GHS hazard phrase			
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed			
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin			
Skin Corrosion/Irritation, Category 3	none	Warning	Causes mild skin irritation			
Serious Eye Damage/Eye Irritation, Category	1 Corrosive	Danger	Causes serious eye damage			
GHS Precaution Phrases:	H316: Causes mild skin irritation.H318: Causes serious eye damage.P264: Wash hands thoroughly after handling.P280: Wear protective gloves/clothing and eye/face protection as specified by the					
GHS Response Phrases:	 manufacturer/supplier or the competent authority. P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwer P330: Rinse mouth. P312: Call a POISON CENTER or doctor/physician if you feel unwell. P332+313: If skin irritation occurs, get medical advice/attention. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a POISON CENTER or doctor/physician. 					
GHS Storage and Disposal Phrases:		-				
GHS Storage and Disposal Phrases: Please refer to Section 7 for Storage and Section 13 for Disposal information. 2.3 Adverse Human Health Effects and Symptoms: Causes mild skin irritation. Symptoms: Causes serious eye damage. Harmful if swallowed. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation or skin absorption. May cause respiratory system irritation.			kin absorption.			
Target Organs:	No data available	-				



Please refer to Section 11.

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LD 50 / LC 50:

Medical Conditions Generally Aggravated By No data available. Exposure:

Hazard	dous Components (Chemical Name)	CAS #		EC#	Risk Phrases	RTECS #	
	tassium phosphate, dibasic	7758-11-4	13.3 %	231-834-5	R41	TC5580000	
	tassium phosphate, Monobasic	7778-77-0	3.21 %	231-913-4	No phrases apply.	TC6615500	
	odium azide	26628-22-8		247-852-1	R28-32-50/53	VY8050000	
	dium chloride	7647-14-5		231-598-3	R36	VZ4725000	
5. EC	DTA, tetrasodium salt, hydrate	194491-31-1	0.38 %	NA	R22-41	NA	
6. Bo	ovine Serum Albumin (BSA)	9048-46-8	1.0 %	232-936-2	R22	MT6446000	
7. Wa	ater	7732-18-5	58.61 %	231-791-2	No phrases apply.	ZC0110000	
		Section 4.	First Aid Me	easures		•	
4.1	Description of First Aid Measures:						
4.1.1	In Case of Inhalation:	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.			y trained		
4.1.2	In Case of Skin Contact:	-	-		or at least 20 minutes. Rea ms occur. Wash clothing		
4.1.3	In Case of Eye Contact:	• •	t and flush eyes wit ted by medical pers		for at least 20 minutes. Ha	ave eyes	
4.1.4	In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do medical personnel.			-			
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	Exposure may cause: abdominal pain, congestion in internal organs, dehydration, diarrhea, gastrointestinal disturbances, lowered blood pressure, nausea, and vomiting.					
4.3 attent	Indication of any immediate medical tion and special treatment needed:	No data available.					
	Se	ction 5. Fi	re Fighting	Measures			
5.1	Suitable Extinguishing Media:		tant foam, carbon d o cool fire-exposed		ry chemical spray.		
	Unsuitable Extinguishing Media:	A solid water stream may be inefficient.					
5.2	Flammable Properties and Hazards:	No data available.					
	Flash Pt:	No data.					
	Autoignition Pt:	No data available					
	Explosive Limits:	LEL: No data.		UEL: No data.			
	Hazardous Combustion Products:	No data available					
5.3	Fire Fighting Instructions:	-	ear self-contained bi full protective gear		pressure-demand (NIOSI with skin and eyes.	H approved or	
	Sectio	n 6. Accid	ental Relea	se Measur	es		
6.1	Protective Precautions, Protective oment and Emergency Procedures:	As conditions wa		H approved self-co	n. ntained breathing apparat y goggles, and heavy rub	-	
Equip							
Equip 6.2							



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Se	ection 7. H	andling and Storag	•	Ision: 09/13/2012		
7.1 Precautions To Be Taken in Handling:	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.					
7.2 Precautions To Be Taken in Storing:	Keep container tightly closed. Store in accordance with information listed on the product insert.					
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.					
Section 8.	Exposure	Controls/Personal	Protection			
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits		
1. Potassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.		
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.		
3. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.		
4. Sodium chloride	7647-14-5	No data.	No data.	No data.		
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No data.	No data.	No data.		
6. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.		
7. Water	7732-18-5	No data.	No data.	No data.		
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe		
1. Potassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.		
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.		
3. Sodium azide	26628-22-8	0 0	TWA: 0.1 mg/m3	TWA: 0.1		
		STEL: 0.3 mg/m3 ()	STEL: 0.3 mg/m3	mg/m3 STEL: 0.3 mg/m3		
4. Sodium chloride	7647-14-5	No data.	No data.	No data.		
5. EDTA, tetrasodium salt, hydrate	194491-31-1	No data.	No data.	No data.		
6. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.		
7. Water	7732-18-5	No data.	No data.	No data.		
Protective Equipment Summary - Hazard Label Information:	glasses Safety	shower in work area Vent Ho				
8.2.1 Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.					
8.2.2.1 Eye Protection:	Safety glasses					
8.2.2.2 Protective Gloves:	Compatible chem	ical-resistant gloves				
Other Protective Clothing:	Lab coat					
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.					
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.					
8.2.3 Environmental Exposure Controls:	No data available					
Section	9. Physica	I and Chemical Pr	operties			
9.1 Information on Basic Physical and Che	mical Properties					
Physical States:	[]Gas [X]	Liquid [] Solid				
Appearance and Odor:	A clear, colorless solution					
pH:	7.0					
				Multi-rogion forma		



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				Supercedes R	evision: 09/13/201	
Melting Point:	No data.					
Boiling Point:	No data.					
Flash Pt:	No data.					
Evaporation Rate:	No data.					
Vapor Pressure (vs. Air or mm Hg):	No data.					
Vapor Density (vs. Air = 1):	No data.					
Specific Gravity (Water = 1):	No data.					
Solubility in Water:	No data.					
Autoignition Pt:	No data.					
Explosive Properties:	No data available					
Oxidizing Properties:	No data available					
	No data available	•				
Percent Volatile:	No data.					
Se	ction 10. St	tability and	1 Reactivity	/		
10.1 Reactivity:	No data available					
10.2 Stability:	Unstable [] Stable [X]					
10.3 Stability Note(s):	Stable if stored in	accordance with	information listed	l on the product insert.		
10.4 Conditions To Avoid:	No data available.					
10.3 Polymerization:	Will occur [] Will not occur [X]					
10.5 Incompatibility - Materials To Avoid:	strong oxidizing agents					
10.6 Hazardous Decomposition Or	hydrogen chloride gas					
Byproducts:	potassium oxides					
	sodium oxides					
Sec	tion 11. To	xicological	Informatic	on		
11.1 Information on Toxicological Effects:		<u> </u>		been thoroughly studied	d.	
	C C		-	0.		
			-	kin LD50 (rabbit): >4,64		
	Sodium chloride - Toxicity Data: Oral LD50 (rat): 3,000 mg/kg; Oral LD50 (mouse): 4,000					
	mg/kg; Sodium chloride ·	- Irritation Data: I	Eyes (rabbit): 100	mg (24h) moderate; Sk	in (rabbit): 500 mg	
	(24h) mild;		/ .		. / .	
Chronic Toxicological Effects:	Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here.					
	See actual entry in RTECS for complete information.					
			RTECS Number: 7	ГС6615500		
	Sodium chloride			4007	00111	
Hazardous Components (Chemical Name) . Potassium phosphate, dibasic	CAS # 7758-11-4	NTP n.a.	n.a.	ACGIH n.a.	n.a.	
Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.	
. Sodium azide	26628-22-8		n.a.	A4	n.a.	
. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.	
5. EDTA, tetrasodium salt, hydrate	194491-31-1	n.a.	n.a.	n.a.	n.a.	
6. Bovine Serum Albumin (BSA)	9048-46-8		n.a.	n.a.	n.a.	
7. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.	



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					Superceues Rev	151011: 09/13/2012	
	Sec	ction 12. E	cological In	formation			
12.1	-						
		Runoff from fire	control or dilution v	vater may cause poll	ution.		
	Sect	ion 13. Dis	sposal Cons	siderations			
13.1			•	te, and federal regul	ations.		
· · ·		-		-			
L		uuun 14. I	ransport Inf	ormation			
14.1	LAND TRANSPORT (US DOT)						
D		Not dangerous go	oods.				
14.1	LAND TRANSPORT (European ADR/RID)					
AI	DR/RID Shipping Name	Not dangerous go	oods.				
14.3	AIR TRANSPORT (ICAO/IATA)						
IC	AO/IATA Shipping Name	Not dangerous go	oods.				
Addi	tional Transport Information:	Transport in acco	rdance with local, s	tate, and federal reg	ulations.		
		-	egulatory In	-			
F 11			oguiatol y Ifi	ποιπαιιΟΠ			
	pean Community Hazard Symbol codes						
Euro	pean Community Risk and Safety Phrases						
	R22 - Harmful if swallowed.						
	R36 - Irritating to eyes.S24/25 - Avoid contact with skin and eyes.						
	S24/25 - Avoid contact with skin and eyes. S26 - In case of contact with eyes, rinse in	mmediately with ple	enty of water and seek	medical advice.			
	S36/37/39 - Wear suitable protective clothing						
US E	PA SARA Title III	-					
	dous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110	
	otassium phosphate, dibasic	7758-11-4	No	No	No	No	
	otassium phosphate, Monobasic	7778-77-0	No	No	No	No	
	odium azide odium chloride	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No	
	odium chloride DTA, tetrasodium salt, hydrate	7647-14-5	No No	No No	No No	No No	
	DTA, tetrasodium salt, hydrate	9048-46-8	NO NO	No No	No No	NO NO	
	ater	7732-18-5	No	No	No	No	
	r US EPA or State Lists		1	-	1	I	
Hazar	dous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65	
	otassium phosphate, dibasic	7758-11-4	No	No	Inventory	No	
	otassium phosphate, Monobasic	7778-77-0	No	No	Inventory	No	
	odium azide	26628-22-8	No	No	Inventory	No	
4. So	odium chloride	7647-14-5	No	No	Inventory	No	
	DTA, tetrasodium salt, hydrate	194491-31-1	No	No	No	No	
	ovine Serum Albumin (BSA)	9048-46-8	No	No	Inventory	No	
	ater	7732-18-5	No	No	Inventory	No	
Regu		-	-		.1200, Regulation (EC	.) No.1272/2008,	
		-	rective 67/548/EEC				
	S	Section 16.	Other Infor	mation			
Revis	sion Date:	05/02/2013					
Com	pany Policy or Disclaimer						
Com		ary use.					
Com	pany Policy or Disclaimer For research use only, not for human or veterin DISCLAIMER: This information is believed to	be accurate and rep					
Com	pany Policy or Disclaimer For research use only, not for human or veterin	be accurate and rep or implied, with res	pect to such information	on, and we assume no			



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Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Iden	tification of	f the Substar	nce/Mixture and of the		
1.1 Product Code:	400062				
Product Name:	Wash Buffer Cor	ncentrate (400X)			
1.2 Relevant identified uses of the substan	ce or mixture and	l uses advised again	st		
Relevant identified uses:	For research use	only, not for human of	or veterinary use.		
1.3 Details of the Supplier of the Safety Da	ta Sheet				
Company Name:	Cayman Chemic	al Company			
Emergency Contact:	-	ithin USA and Canad	a: +1 (800)424-9300		
Alternate Emergency Contact:	CHEMTREC Ou	tside USA and Cana	da: +1 (703)527-3887		
Information:	Cayman Chemical Company +1 (734)971-3335				
Web site address:	www.caymanchem.com				
Section 2. Hazards Identification					
GHS Classification	Placard	Key word	GHS hazard phrase		
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin		
Serious Eye Damage/Eye Irritation, Category		Danger	Causes serious eye damage		
GHS Hazard Phrases:	•	armful in contact with	ı skin.		
	H318: Causes se	rious eye damage.			
GHS Precaution Phrases:	P280: Wear prote	ective gloves/clothing	g and eye/face protection as specified by the		
	manufacturer/sup	oplier or the competer	nt authority.		
GHS Response Phrases:	P312: Call a POI	SON CENTER or do	ctor/physician if you feel unwell.		
	P305+351+338:	IF IN EYES: Rinse c	autiously with water for several minutes. Remove contact		
	lenses, if present	and easy to do. Cont	inue rinsing.		
	P310: Immediate	ely call a POISON CE	ENTER or doctor/physician.		
GHS Storage and Disposal Phrases:	Please refer to Se	ection 7 for Storage a	nd Section 13 for Disposal information.		
2.3 Adverse Human Health Effects and	Causes serious e	ye damage.			
Symptoms:	Material may be	irritating to the muco	ous membranes and upper respiratory tract.		
	May be harmful	by inhalation, ingesti	on, or skin absorption.		
	May cause skin o	or respiratory system	irritation.		
	To the best of ou	r knowledge, the toxi	cological properties have not been thoroughly investigated		
Target Organs:	No data available	2.			
Medical Conditions Generally Aggravated By	No data available	2.			

Exposure:

Section 3. Composition/Information on Ingredients					
Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. Potassium phosphate, dibasic	7758-11-4	53.0 %	231-834-5	R41	TC5580000
2. Potassium phosphate, Monobasic	7778-77-0	12.9 %	231-913-4	No phrases apply.	TC6615500
3. Water	7732-18-5	34.1 %	231-791-2	No phrases apply.	ZC0110000



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					es Revision: 09/13/2012			
		Section 4.	First Aid Mea	sures				
4.1	Description of First Aid Measures:							
4.1.1	In Case of Inhalation:		air. If not breathing, gi mediate medical atten	ve artificial respiration or give of tion.	xygen by trained			
4.1.2	In Case of Skin Contact:	-		lenty of water for at least 20 min ntion if symptoms occur. Wash o				
4.1.3	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.						
4.1.4	In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so b medical personnel.						
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	Ingestion of large vomiting.	Ingestion of large amounts can cause abdominal pain, lowered blood pressure, nausea, and vomiting.					
4.3 atter	Indication of any immediate medical tion and special treatment needed:	No data available	No data available.					
	Se	ection 5. Fi	re Fighting M	easures				
5.1	Suitable Extinguishing Media:	Use alcohol-resis		ide, water, or dry chemical spray	1.			
	Unsuitable Extinguishing Media:	A solid water stream may be inefficient.						
5.2	Flammable Properties and Hazards:	No data available	No data available.					
	Flash Pt:	No data.	No data.					
	Autoignition Pt:	No data available						
	Explosive Limits:	LEL: No data.	UI	EL: No data.				
	Hazardous Combustion Products:	No data available						
5.3	Fire Fighting Instructions:	-		thing apparatus pressure-demand prevent contact with skin and eye				
	Section	on 6. Accid	ental Release	e Measures				
6.1 Equi	Protective Precautions, Protective pment and Emergency Procedures:	As conditions wa		equate ventilation. pproved self-contained breathing ober boots, safety goggles, and he				
6.2	Environmental Precautions:		•	ronment, if safe to do so.				
6.3	Methods and Material For	•	collect, as appropriate.					
	ainment and Cleaning Up:	•		for disposal in accordance with lo	ocal regulations.			
	S	ection 7. H	andling and S	Storage				
7.1	Precautions To Be Taken in Handling:		dust/fume/gas/mist/vap					
	-	-	or repeated exposure.	1 2				
7.2	Precautions To Be Taken in Storing:	Keep container ti	ghtly closed.					
		Store in accordan	ce with information lis	sted on the product insert.				
Haza	rd Label Information:	Avoid contact wi Wash thoroughly	-	not reuse this container. Use	with adequate ventilation.			
	Section 8.	Exposure	Controls/Pers	sonal Protection				
Hazaı	dous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits			
	otassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.			



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Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits	
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.	
3. Water	7732-18-5	No data.	No data.	No data.	
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe	
1. Potassium phosphate, dibasic	7758-11-4	No data.	No data.	No data.	
2. Potassium phosphate, Monobasic	7778-77-0	No data.	No data.	No data.	
3. Water	7732-18-5	No data.	No data.	No data.	
Label Information:	Compatible chemical-resistant glovesEye wash station in work areaLab coatSafetyglassesSafety shower in work areaVent Hood				
	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.				
8.2.2.1 Eye Protection:	Safety glasses				
8.2.2.2 Protective Gloves:	Compatible chem	ical-resistant gloves			
Other Protective Clothing:	Lab coat				
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	respirator, as conditions warrant			
	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling.				
·····	No data available	l and Chemical Pro			

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

10.3 Stability Note(s):	Stable if stored in accordance with information listed on the product insert.				
10.2 Stability:	Unstable [] Stable [X]				
10.1 Reactivity:	No data available.				
	Section 10. Stability and Reactivity				
Percent Volatile:	No data.				
9.2 Other Information					
Oxidizing Properties:	No data available.				
Explosive Properties:	No data available.				
Autoignition Pt:	No data.				
Solubility in Water:	No data.				
Specific Gravity (Water = 1):	No data.				
Vapor Density (vs. Air = 1):	No data.				
Vapor Pressure (vs. Air or mm Hg):	No data.				
Evaporation Rate:	No data.				
Flash Pt:	No data.				
Boiling Point:	No data.				
Melting Point:	No data.				
pH:	7.4				
Appearance and Odor:	A clear, colorless solution				
Physical States:	[]Gas [X]Liquid []Solid				



				Caperecease riera	
10.4 Conditions To Avoid:	No data available				
10.3 Polymerization:	Will occur []	Will not occur [X	K]		
10.5 Incompatibility - Materials To Avoid:	strong oxidizing a	agents			
10.6 Hazardous Decomposition Or	phosphorus oxide	s			
Byproducts:	potassium oxides				
Sec	tion 11. To:	xicological I	nformation		
11.1 Information on Toxicological Effects:	The toxicological	effects of this produ	uct have not been the	proughly studied.	
Chronic Toxicological Effects:	No data available				
Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Potassium phosphate, dibasic	7758-11-4	n.a.	n.a.	n.a.	n.a.
2. Potassium phosphate, Monobasic	7778-77-0	n.a.	n.a.	n.a.	n.a.
3. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.
Carcinogenicity:	NTP? No IA	RC Monographs? N	lo OSHA Regu	lated? No	
Se	ction 12. E	cological Inf	formation		
12.1 Toxicity:	Avoid release into	o the environment.			
	Runoff from fire	control or dilution w	ater may cause pollu	ution.	
Sec	tion 13. Dis	sposal Cons	siderations		
13.1 Waste Disposal Method:		-	te, and federal regula	ations.	
	-				
	CUOIT 14. 1	ransport Inf	ormation		
14.1 LAND TRANSPORT (US DOT)					
DOT Proper Shipping Name	Not dangerous go	ods.			
14.1 LAND TRANSPORT (European ADR/RI	D)				
ADR/RID Shipping Name	Not dangerous go	ods.			
14.3 AIR TRANSPORT (ICAO/IATA)					
ICAO/IATA Shipping Name	Not dangerous go	ods.			
Additional Transport Information:	Transport in acco	rdance with local, st	ate, and federal regu	lations.	
Se	ction 15. R	egulatory In	formation		
European Community Hazard Symbol codes	Xi: Irritant				
European Community Risk and Safety Phrase	s				
R41 - Risk of serious damage to the eye	5.				
S24/25 - Avoid contact with skin and eyes					
S26 - In case of contact with eyes, rinse S36/37/39 - Wear suitable protective clothin	• •	•	medical advice.		
US EPA SARA Title III	.g, gro , es and ej e, ra	Protection.			
Hazardous Components (Chemical Name)					
Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Potassium phosphate, dibasic	CAS # 7758-11-4	Sec.302 (EHS) No	Sec.304 RQ No	Sec.313 (TRI) No	Sec.110
	_				
 Potassium phosphate, dibasic Potassium phosphate, Monobasic Water 	7758-11-4	No	No	No	No
 Potassium phosphate, dibasic Potassium phosphate, Monobasic 	7758-11-4 7778-77-0	No No	No No	No No	No No
 Potassium phosphate, dibasic Potassium phosphate, Monobasic Water Other US EPA or State Lists Hazardous Components (Chemical Name) 	7758-11-4 7778-77-0 7732-18-5 CAS #	No No CAA HAP,ODC	No No No CWA NPDES	No No No TSCA	No No No CA PROP.65
 Potassium phosphate, dibasic Potassium phosphate, Monobasic Water Other US EPA or State Lists Hazardous Components (Chemical Name) Potassium phosphate, dibasic 	7758-11-4 7778-77-0 7732-18-5 CAS # 7758-11-4	No No CAA HAP,ODC No	No No No CWA NPDES No	No No No TSCA Inventory	No No No CA PROP.65 No
 Potassium phosphate, dibasic Potassium phosphate, Monobasic Water Other US EPA or State Lists Hazardous Components (Chemical Name) Potassium phosphate, dibasic Potassium phosphate, Monobasic 	7758-11-4 7778-77-0 7732-18-5 CAS # 7758-11-4 7778-77-0	No No CAA HAP,ODC No No	No No No CWA NPDES No No	No No No TSCA Inventory Inventory	No No No CA PROP.65 No No
 Potassium phosphate, dibasic Potassium phosphate, Monobasic Water Other US EPA or State Lists Hazardous Components (Chemical Name) Potassium phosphate, dibasic 	7758-11-4 7778-77-0 7732-18-5 CAS # 7758-11-4	No No CAA HAP,ODC No	No No No CWA NPDES No	No No No TSCA Inventory	No No No CA PROP.65 No



Revision: 05/02/2013

Regulatory Information Statement:

Supercedes Revision: 09/13/2012 This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

Section 16. Other Information

Revision Date:

05/02/2013

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.



Revision: 07/16/2013 Supersedes Revision: 11/02/2011

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



Section 1. Identification of the Substance/Mixture and of the					
1.1 Product Code:	481020				
Product Name:	Cyclic GMP AC	hE Tracer			
Synonyms:	cGMP AChE Tr				
1.2 Relevant identified uses of the substat		,	nainst		
Relevant identified uses:			-		
		only, not for nun	nan or veterinary use.		
1.3 Details of the Supplier of the Safety Da					
Company Name:	Cayman Chemic				
Emergency Contact:	CHEMTREC W	ithin USA and Ca	anada: +1 (800)424-9300		
Alternate Emergency Contact:	CHEMTREC Outside USA and Canada: +1 (703)527-3887				
Information:	Cayman Chemic	al Company	+1 (734)971-3335		
Web site address:	www.caymanche	em.com			
S	ection 2. F	lazards Id	entification		
GHS Classification	Placard	Key word	GHS hazard phrase		
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed		
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin		
Skin Corrosion/Irritation, Category 3	none	Warning	Causes mild skin irritation		
Serious Eye Damage/Eye Irritation, Category GHS Hazard Phrases:	1 Corrosive	Danger	Causes serious eye damage		
GHS Precaution Phrases:	H316: Causes m H318: Causes se P264: Wash {ha	armful in contact ild skin irritation. rious eye damage nds} thoroughly a ptective gloves/pro	e. after handling.		
GHS Response Phrases:	 P280: Wear {protective gloves/protective clothing/eye protection/face protection}. P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330: Rinse mouth. P312: Call a {POISON CENTER/doctor/} if you feel unwell. P332+313: If skin irritation occurs, get medical advice/attention. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310: Immediately call a {POISON CENTER/doctor/}. 				
GHS Storage and Disposal Phrases:	Please refer to S	ection 7 for Stora	ge and Section 13 for Disposal information.		
2.3 Adverse Human Health Effects and Symptoms:	 Causes mild skin irritation. Causes serious eye damage. Harmful if swallowed. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation or skin absorption. May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated 				
Target Organs:	No data availabl	e.			



Medical Conditions Generally Aggravated By No data available. Exposure:

Hazardo	us Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
. Cycli	c GMP AChE Tracer	NA	99.99 %	NA	R22-41	NA
2. Sodiu	um azide	26628-22-8	0.01 %	247-852-1	R28-32-50/53	VY805000
		Section 4.	First Aid Me	easures		
4.1 D	Description of First Aid Measures:					
4.1.1 I	n Case of Inhalation:		air. If not breathing mediate medical at	0	piration or give oxygen	by trained
4.1.2 I	n Case of Skin Contact:	-	-		or at least 20 minutes. R	
4.1.3 I	n Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.				
4.1.4 I	n Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so medical personnel.				
	nportant Symptoms and Effects, cute and Delayed:	No data available.				
	ndication of any immediate medical n and special treatment needed:	No data available				
	Se	ction 5. Fi	re Fighting	Measures		
5.1 S	uitable Extinguishing Media:		tant foam, carbon d o cool fire-exposed		ry chemical spray.	
U	Insuitable Extinguishing Media:	A solid water stre	am may be ineffici	ent.		
5.2 F	lammable Properties and Hazards:	No data available				
F	lash Pt:	No data.				
A	autoignition Pt:	No data available				
E	xplosive Limits:	LEL: No data.		UEL: No data.		
н	lazardous Combustion Products:	No data available				
5.3 F	ire Fighting Instructions:	•		0 11	pressure-demand (NIOS) with skin and eyes.	SH approved o
	Sectio	n 6. Accid	ental Relea	se Measur	es	
	rotective Precautions, Protective ent and Emergency Procedures:	As conditions wa		H approved self-co	e ventilation. ontained breathing appar ty goggles, and heavy ru	-
6.2 E	invironmental Precautions:	Take steps to avo	id release into the e	nvironment, if saf	e to do so.	
	Nethods and Material For Iment and Cleaning Up:	•	collect, as appropri nical waste contain		accordance with local re-	gulations.
	Se	ection 7. H	andling and	Storage		
7.1 P	Precautions To Be Taken in Handling:	-	dust/fume/gas/mist/ or repeated exposu			
7.2 P	Precautions To Be Taken in Storing:	Keep container tig	ghtly closed. ce with informatior	listed on the prod	luct incort	



Revision: 07/16/2013 d Р 11/00/001

CHIMICAL	Sychie			Revision: 07/16/2013 Revision: 11/02/2011
Hazard Label Information:	Avoid contact wi Wash thoroughly	-		h adequate ventilation
Section 8.	Exposure	Controls/Persor	nal Protection	
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. Cyclic GMP AChE Tracer	NA	No data.	No data.	No data.
2. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Cyclic GMP AChE Tracer	NA	No data.	No data.	No data.
2. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3
Protective Equipment Summary - Hazard Label Information:	-		e wash station in work area L nt Hood	ab coat Safety
8.2.1 Engineering Controls (Ventilation etc.):	Use process enclo		ation, or other engineering cont	rols to control airborn
8.2.2.1 Eye Protection:	Safety glasses			
8.2.2.2 Protective Gloves:	Compatible chem	nical-resistant gloves		
Other Protective Clothing:	Lab coat			
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	l respirator, as conditions w	varrant.	
Work/Hygienic/Maintenance Practices: 8.2.3 Environmental Exposure Controls:	Do not take intern Facilities storing safety shower. Wash thoroughly No data available	or utilizing this material sh after handling.	ould be equipped with an eyew	ash facility and a
Section	9. Physica	al and Chemical	Properties	
9.1 Information on Basic Physical and Che	emical Properties			
Physical States:	[]Gas []I	Liquid [X] Solid		
Appearance and Odor:	A lyophilized pov	wder		
Melting Point:	No data.			
Boiling Point:	No data.			
Flash Pt:	No data.			
Evaporation Rate:	No data.			
Vapor Pressure (vs. Air or mm Hg):	No data.			
Vapor Density (vs. Air = 1):	No data.			
Specific Gravity (Water = 1):	No data.			
Solubility in Water:	No data.			
Autoignition Pt:	No data.			
Explosive Properties:	No data available	2.		

No data available.

No data.

Oxidizing Properties: 9.2 Other Information Percent Volatile:



Supersedes Revision: 11/02/2011

Se	ection 10. S	tability and	Reactivity		
10.1 Reactivity:	No data available	-	· J		
10.2 Stability:	Unstable []	Stable [X]			
10.3 Stability Note(s):			nformation listed on	the product insert.	
10.4 Conditions To Avoid:	No data available			1	
10.3 Polymerization:	Will occur []	Will not occur []	X 1		
10.5 Incompatibility - Materials To Avoid:	strong oxidizing a				
10.6 Hazardous Decomposition Or	hydrogen chlorid	-			
Byproducts:	phosphorus oxide	0			
	potassium oxides				
	sodium oxides				
Sec	ction 11. To:	xicological	Information		
11.1 Information on Toxicological Effects:	The toxicological	l effects of this proc	duct have not been th	noroughly studied.	
Chronic Toxicological Effects:	No data available	e.			
Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Cyclic GMP AChE Tracer	NA	n.a.	n.a.	n.a.	n.a.
2. Sodium azide	26628-22-8		n.a.	A4	n.a.
Se	ection 12. E	cological In	ntormation		
12.1 Toxicity:		o the environment.			
	Runoff from fire	control or dilution	water may cause pol	lution.	
Se	ction 13. Dis	sposal Con	siderations		
13.1 Waste Disposal Method:	Dispose in accord	dance with local, sta	ate, and federal regu	lations.	
S	ection 14. T	ransport In	formation		
14.1 LAND TRANSPORT (US DOT)					
DOT Proper Shipping Name	Not dangerous go	ada			
		Jous.			
14.1 LAND TRANSPORT (European ADR/R		Jous.			
· ·	ID)				
ADR/RID Shipping Name					
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA)	Not dangerous go	oods.			
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name	Not dangerous go	oods. oods.	state and fodowal rac	ulations	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information:	Not dangerous go Not dangerous go Transport in acco	oods. oods. ordance with local, s	state, and federal reg	ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information:	Not dangerous go Not dangerous go Transport in acco ection 15. R	oods. oods. ordance with local, s		ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information:	Not dangerous go Not dangerous go Transport in acco ection 15. R	oods. oods. ordance with local, s		ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information:	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful	oods. oods. ordance with local, s		ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Sec European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed.	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es	oods. oods. ordance with local, s		ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes European Community Risk and Safety Phras	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es	oods. oods. ordance with local, s		ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and eye	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es es. es.	oods. ordance with local, s egulatory Ir	nformation	ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Sec European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es es. es. e immediately with pla	oods. ordance with local, s egulatory Ir	nformation	ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and eye	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es es. es. e immediately with pla	oods. ordance with local, s egulatory Ir	nformation	ulations.	
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins S36/37/39 - Wear suitable protective cloth US EPA SARA Title III	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es es. es. e immediately with pla	oods. ordance with local, s egulatory Ir enty of water and seek ce protection.	nformation	ulations.	Sec.110
ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Sec European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins S36/37/39 - Wear suitable protective cloth	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful es es. es. e immediately with pla- ing, gloves and eye/fac	oods. ordance with local, s egulatory Ir enty of water and seek ce protection. Sec.302 (EHS)	nformation		Sec.110



SAFETY DATA SHEET Cyclic GMP AChE Tracer

Revision: 07/16/2013 Supersedes Revision: 11/02/2011

Other US EPA or State Lists					
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. Cyclic GMP AChE Tracer	NA	No	No	No	No
2. Sodium azide	26628-22-8	No	No	Inventory	No
Regulatory Information Statement:	1	epared in accordanc /EEC as amended.	e with Regulation (I	EC) No.1272/2008 a	and European
	Section 16.	. Other Infor	rmation		
Revision Date:	07/16/2013				

Company Policy or Disclaimer

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.



Revision: 07/16/2013 Supersedes Revision: 11/02/2011

Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



	101005		
1.1 Product Code:	481022		
Product Name:	Cyclic GMP EIA	A Antiserum	
Synonyms:	cGMP EIA Anti	serum;	
1.2 Relevant identified uses of the subst	ance or mixture and	d uses advised a	against
Relevant identified uses:	For research use	only, not for hu	man or veterinary use.
1.3 Details of the Supplier of the Safety I	Data Sheet		
Company Name:	Cayman Chemic	al Company	
Emergency Contact:	CHEMTREC W	ithin USA and C	Canada: +1 (800)424-9300
Alternate Emergency Contact:	CHEMTREC O	utside USA and (Canada: +1 (703)527-3887
Information:	Cayman Chemic	al Company	+1 (734)971-3335
Web site address:	www.caymanche		
	-		
	Section 2. H	-	
GHS Classification	Placard	Key word	GHS hazard phrase
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin
Skin Corrosion/Irritation, Category 3	none	Warning	Causes mild skin irritation
Serious Eye Damage/Eye Irritation, Catego	ry 1 Corrosive	Danger	Causes serious eye damage
GHS Hazard Phrases:	H302: Harmful i	f swallowed.	
	H313: May be h		
	H316: Causes m		
	H318: Causes se		
GHS Precaution Phrases:	P264: Wash {has P280: Wear {pro		after handling. rotective clothing/eye protection/face protection}.
CUS Despense Divesses			
GHS Response Phrases:	P301+312: IF SV P330: Rinse mou		Call a POISON CENTER or doctor/physician if you feel unwe
			R/doctor/} if you feel unwell.
			rs, get medical advice/attention.
	P305+351+338:	IF IN EYES: Rig	nse cautiously with water for several minutes. Remove contact
	-	-	Continue rinsing.
	P310: Immediate	ely call a {POISO	ON CENTER/doctor/}.
GHS Storage and Disposal Phrases:	Please refer to Se	ection 7 for Stora	age and Section 13 for Disposal information.
2.3 Adverse Human Health Effects and	Causes mild skir		
Symptoms:	Causes serious e		
	Harmful if swall		
			mucous membranes and upper respiratory tract.
	May be harmful May cause respi	•	
	May cause respin		
	To the best of ou	ir knowledge, the	e toxicological properties have not been thoroughly investigat



Medical Conditions Generally Aggravated ByNo data available.Exposure:

H270r	lous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #		
	clic GMP EIA Antiserum	NA	99.99 %	NA	Risk Phrases	NA		
	dium azide	26628-22-8	0.01 %	247-852-1	R28-32-50/53	VY805000		
			First Aid Me	asures		I		
4.1	Description of First Aid Measures:							
4.1.1	In Case of Inhalation:		ir. If not breathing, mediate medical att		piration or give oxygen	by trained		
4.1.2	In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse						
4.1.3	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.						
4.1.4	In Case of Ingestion:	Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so medical personnel.						
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	No data available						
4.3 attent	Indication of any immediate medical ion and special treatment needed:	No data available						
	Se	ction 5. Fir	e Fighting N	Measures				
5.1	Suitable Extinguishing Media:		ant foam, carbon di o cool fire-exposed		ry chemical spray.			
	Unsuitable Extinguishing Media:	A solid water stre	am may be inefficie	nt.				
5.2	Flammable Properties and Hazards:	No data available						
	Flash Pt:	No data.						
	Autoignition Pt:	No data available.						
	Explosive Limits:	LEL: No data.		UEL: No data.				
	Hazardous Combustion Products:	No data available						
5.3	Fire Fighting Instructions:	-	ar self-contained br ull protective gear to		pressure-demand (NIOS with skin and eyes.	SH approved of		
	Sectio	on 6. Accid	ental Relea	se Measur	es			
6.1 Equip	Protective Precautions, Protective ment and Emergency Procedures:	As conditions was		I approved self-co	e ventilation. ontained breathing appar ty goggles, and heavy ru	-		
6.2	Environmental Precautions:	Take steps to avoi	d release into the er	vironment, if safe	e to do so.			
6.3 Conta	Methods and Material For inment and Cleaning Up:	-	collect, as appropria		accordance with local reg	gulations.		
	S	ection 7. H	andling and	Storage				
7.1	Precautions To Be Taken in Handling:	Avoid breathing d	lust/fume/gas/mist/v or repeated exposur	apours/spray.				
7.2	Precautions To Be Taken in Storing:	Keep container tig Store in accordan		1. 4 1 4 1	L			



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	Cyclic (F	Revision: 07/16/2013 Revision: 11/02/2011			
Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation Wash thoroughly after handling.						
Section 8.	Exposure	Controls/Persor	nal Protection				
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits			
1. Cyclic GMP EIA Antiserum	NA	No data.	No data.	No data.			
2. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.			
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe			
1. Cyclic GMP EIA Antiserum	NA	No data.	No data.	No data.			
2. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3			
Protective Equipment Summary - Hazard Label Information:	-		e wash station in work area La ht Hood	ab coat Safety			
8.2.1 Engineering Controls (Ventilation etc.):	-	osures, local exhaust ventila mmended exposure limits.	ation, or other engineering contr	ols to control airbor			
8.2.2.1 Eye Protection:	Safety glasses						
8.2.2.2 Protective Gloves:	Compatible chem	ical-resistant gloves					
Other Protective Clothing:	Lab coat						
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	respirator, as conditions w	varrant.				
Work/Hygienic/Maintenance Practices: 8.2.3 Environmental Exposure Controls:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Wash thoroughly after handling. No data available.						
Section	9. Physica	al and Chemical	Properties				
9.1 Information on Basic Physical and Che	,		·				
Physical States:	[]Gas []I	Liquid [X] Solid					
Appearance and Odor:	A lyophilized pov	-					
Melting Point:	No data.						
Boiling Point:	No data.						
Flash Pt:	No data.						
Evaporation Rate:	No data.						
Vapor Pressure (vs. Air or mm Hg):	No data.						
Vapor Density (vs. Air = 1):	No data.						
Specific Gravity (Water = 1):	No data.						
Solubility in Water:	No data.						
Autoignition Pt:	No data.						
Explosive Properties:	No data available						
Oxidizing Properties:	No data available						
9.2 Other Information							

No data.

Percent Volatile:



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Si	ection 10. St	tability and	Reactivity					
10.1 Reactivity:	No data available		Redolivity					
10.2 Stability:		Unstable [] Stable [X]						
10.3 Stability Note(s):		Stable if stored in accordance with information listed on the product insert.						
		No data available.						
10.4 Conditions To Avoid:								
10.3 Polymerization:	Will occur []	Will not occur [2	X]					
10.5 Incompatibility - Materials To Avoid:	strong oxidizing a	-						
10.6 Hazardous Decomposition Or Byproducts:	hydrogen chloride phosphorus oxide	-						
	potassium oxides							
	sodium oxides							
Se	ction 11. To:	xicological I	nformation					
11.1 Information on Toxicological Effects:		0	uct have not been th	oroughly studied.				
Chronic Toxicological Effects:	No data available							
Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA			
. Cyclic GMP EIA Antiserum	NA	n.a.	n.a.	n.a.	n.a.			
2. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.			
S	ection 12. E	cological In	formation					
12.1 Toxicity:	Avoid release inte	o the environment.						
	Runoff from fire	control or dilution v	water may cause poll	ution.				
Se	ction 13. Dis	sposal Cons	siderations					
13.1 Waste Disposal Method:		•	te, and federal regul	ations.				
S	ection 14. T	ransport Inf	formation					
14.1 LAND TRANSPORT (US DOT)								
DOT Proper Shipping Name	Not dangerous go	oods.						
14.1 LAND TRANSPORT (European ADR/	RID)							
ADR/RID Shipping Name	Not dangerous go	oods.						
14.3 AIR TRANSPORT (ICAO/IATA)								
14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name	Not dangerous 20	oods.						
ICAO/IATA Shipping Name	Not dangerous go Transport in acco		tate, and federal reg	ulations.				
ICAO/IATA Shipping Name Additional Transport Information:	Transport in acco	ordance with local, s	tate, and federal reg	ulations.				
ICAO/IATA Shipping Name Additional Transport Information:	Transport in acco	ordance with local, s		ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes	Transport in acco ection 15. Ro Xn: Harmful	ordance with local, s		ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Second Stranger S	Transport in acco ection 15. Ro Xn: Harmful	ordance with local, s		ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes	Transport in acco ection 15. Re Xn: Harmful ses	ordance with local, s		ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust.	Transport in acco ection 15. Re Xn: Harmful ses	ordance with local, s		ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey	Transport in acco ection 15. Re Xn: Harmful ses yes.	egulatory In	formation	ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust.	Transport in acco ection 15. Ref Xn: Harmful ses yes. res. se immediately with pla	enty of water and seek	formation	ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the er S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins S36/37/39 - Wear suitable protective cloth	Transport in acco ection 15. Ref Xn: Harmful ses yes. res. se immediately with pla	enty of water and seek	formation	ulations.				
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed. R41 - Risk of serious damage to the en S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rim S36/37/39 - Wear suitable protective cloth US EPA SARA Title III Hazardous Components (Chemical Name)	Transport in acco ection 15. Ref Xn: Harmful ses yes. res. se immediately with pla	enty of water and seek	formation	ulations.	Sec.110			
ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins S36/37/39 - Wear suitable protective cloth	Transport in acco ection 15. Re Xn: Harmful ses yes. /es. se immediately with pla- ning, gloves and eye/fac	enty of water and seek ce protection.	medical advice.		Sec.110 No No			



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Other US EPA or State Lists								
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65			
1. Cyclic GMP EIA Antiserum	NA	No	No	No	No			
2. Sodium azide	26628-22-8	No	No	Inventory	No			
Regulatory Information Statement: This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.								
Section 16. Other Information								

07/16/2013

Company Policy or Disclaimer

Revision Date:

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.



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Cayman Chemical Company 1180 E. Ellsworth Rd. Ann Arbor, MI 48108



	· c · . ·	(4) 0 :					
Section 1. Ident	tification o	t the Subs	tance/Mixture and of the				
1.1 Product Code:	481024						
Product Name:	Cyclic GMP EIA Standard						
Synonyms:	cGMP EIA Star	ndard;					
1.2 Relevant identified uses of the substance	e or mixture an	d uses advised a	gainst				
Relevant identified uses:	Relevant identified uses: For research use only, not for human or veterinary use.						
1.3 Details of the Supplier of the Safety Data Sheet							
Company Name:	Cayman Chemical Company						
Emergency Contact:	CHEMTREC W	/ithin USA and Ca	anada: +1 (800)424-9300				
Alternate Emergency Contact:	CHEMTREC O	utside USA and C					
Information:	Cayman Chemi		+1 (734)971-3335				
Web site address:	-		11 (13-1)/11-3333				
	www.caymanch						
Se	ection 2. H	lazards Id	entification				
GHS Classification	Placard	Key word	GHS hazard phrase				
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed				
Acute Toxicity: Skin, Category 5	none	Warning	May be harmful in contact with skin				
Skin Corrosion/Irritation, Category 3	none	Warning	Causes mild skin irritation				
Serious Eye Damage/Eye Irritation, Category 7 GHS Hazard Phrases:	Corrosive H302: Harmful	Danger	Causes serious eye damage				
GHS Precaution Phrases:	H318: Causes so P264: Wash {ha	nild skin irritation. erious eye damage unds} thoroughly a otactive gloves/pr	e. after handling.				
GHS Response Phrases: P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unw P301-312: Call a {POISON CENTER or doctor/physician if you feel unw P312: Call a {POISON CENTER/doctor/} if you feel unwell. P332+313: If skin irritation occurs, get medical advice/attention. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contal Ienses, if present and easy to do. Continue rinsing. P310: Immediately call a {POISON CENTER/doctor/}.							
GHS Storage and Disposal Phrases:	Please refer to S	Section 7 for Stora	ge and Section 13 for Disposal information.				
 2.3 Adverse Human Health Effects and Symptoms: Causes mild skin irritation. Causes serious eye damage. Harmful if swallowed. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation or skin absorption. May cause respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigate 							
Target Organs:	No data availab	le.					



Medical Conditions Generally Aggravated By No data available. Exposure:

Hazar	dous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #		
	clic GMP EIA Standard	NA	99.99 %	NA	R22-41	NA		
2. So	dium azide	26628-22-8	0.01 %	247-852-1	R28-32-50/53	VY805000		
		Section 4.	First Aid Me	easures				
4.1	Description of First Aid Measures:							
4.1.1	In Case of Inhalation:		air. If not breathing, mediate medical at	-	piration or give oxygen	by trained		
4.1.2	In Case of Skin Contact:	Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reus						
4.1.3	In Case of Eye Contact:	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.						
4.1.4	In Case of Ingestion:		on. Get medical atte	-	us. Never give anything duce vomiting unless di	-		
4.2 Both	Important Symptoms and Effects, Acute and Delayed:	No data available						
4.3 attent	Indication of any immediate medical tion and special treatment needed:	No data available						
	Se	ction 5. Fi	re Fighting I	Measures				
5.1	Suitable Extinguishing Media:		tant foam, carbon d o cool fire-exposed		ry chemical spray.			
	Unsuitable Extinguishing Media:	A solid water stre	am may be inefficie	ent.				
5.2	Flammable Properties and Hazards:	No data available						
	Flash Pt:	No data.						
	Autoignition Pt:	No data available.						
	Explosive Limits:	LEL: No data.		UEL: No data.				
	Hazardous Combustion Products:	No data available						
5.3	Fire Fighting Instructions:				pressure-demand (NIOS with skin and eyes.	SH approved o		
	Sectio	n 6. Accid	ental Relea	se Measur	es			
6.1 Equip	Protective Precautions, Protective oment and Emergency Procedures:	As conditions was		H approved self-co	e ventilation. ontained breathing appar ty goggles, and heavy ru			
6.2	Environmental Precautions:	Take steps to avo	id release into the e	nvironment, if saf	e to do so.			
6.3 Conta	Methods and Material For ainment and Cleaning Up:	-	collect, as appropri- nical waste contain		accordance with local reg	gulations.		
	Se	ection 7. H	andling and	Storage				
7.1	Precautions To Be Taken in Handling:	Avoid breathing of	lust/fume/gas/mist/ or repeated exposu	vapours/spray.				
7.2	Precautions To Be Taken in Storing:	Keep container tig Store in accordan						



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	A	the later and the Design	•	evision: 11/02/2011		
Hazard Label Information:	Avoid contact wi Wash thoroughly	-	reuse this container. Use with	n adequate ventilatio		
Section 8.	Exposure	Controls/Persor	nal Protection			
Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits		
1. Cyclic GMP EIA Standard	NA	No data.	No data.	No data.		
2. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.		
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe		
1. Cyclic GMP EIA Standard	NA	No data.	No data.	No data.		
2. Sodium azide	26628-22-8	TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 ()	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3	TWA: 0.1 mg/m3 STEL: 0.3 mg/m3		
Protective Equipment Summary - Hazard	-		wash station in work area La	ab coat Safety		
Label Information:	glasses Safety	shower in work area Ver	nt Hood			
8.2.1 Engineering Controls (Ventilation etc.):	-	osures, local exhaust ventila mmended exposure limits.	ation, or other engineering contr	ols to control airbor		
8.2.2.1 Eye Protection:	Safety glasses					
8.2.2.2 Protective Gloves:	Compatible chem	ical-resistant gloves				
Other Protective Clothing:	Lab coat					
8.2.2.3 Respiratory Equipment (Specify Type):	NIOSH approved	respirator, as conditions w	arrant.			
Work/Hygienic/Maintenance Practices:	Do not take intern Facilities storing safety shower. Wash thoroughly	or utilizing this material sh	ould be equipped with an eyewa	ish facility and a		
8.2.3 Environmental Exposure Controls:	No data available					
Section	9. Physica	I and Chemical	Properties			
9.1 Information on Basic Physical and Che	mical Properties					
Physical States:	[]Gas []I	Liquid [X] Solid				
Appearance and Odor:	A lyophilized pov	wder				
Melting Point:	No data.					
Boiling Point:	No data.					
Flash Pt:	No data.					
Evaporation Rate:	No data.					
Vapor Pressure (vs. Air or mm Hg):	No data.					
Vapor Density (vs. Air = 1):	No data.					
Specific Gravity (Water = 1):	No data.					
Solubility in Water:	No data.					
Autoignition Pt:	No data.					
Explosive Properties:	No data available					
Oxidizing Properties:	No data available					

No data.

9.2 Other Information

Percent Volatile:



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~	the - 10 - 0	(= 1-313) · · ·			ision: 11/02/20					
S	ection 10. S	tability and	Reactivity							
10.1 Reactivity:	No data available	2.								
10.2 Stability:	Unstable []	Unstable [] Stable [X]								
10.3 Stability Note(s):	Stable if stored in	Stable if stored in accordance with information listed on the product insert.								
10.4 Conditions To Avoid:	No data available	No data available.								
10.3 Polymerization:	Will occur []	Will occur [] Will not occur [X]								
10.5 Incompatibility - Materials To Avoid:	strong oxidizing	agents								
10.6 Hazardous Decomposition Or	hydrogen chlorid	0								
Byproducts:	phosphorus oxide									
	potassium oxides sodium oxides	5								
So	ction 11. To	vicological	Information							
		•		or oughly studied						
11.1 Information on Toxicological Effects:	U	-	luct have not been th	orouginy studied.						
Chronic Toxicological Effects:	No data available	NTP	IARC	ACGIH	OSHA					
Hazardous Components (Chemical Name) 1. Cyclic GMP EIA Standard	NA		n.a.	n.a.	n.a.					
2. Sodium azide	26628-22-8		n.a.	A4	n.a.					
S	ection 12. E	cological In	formation	·	•					
12.1 Toxicity:		o the environment.								
	Runoff from fire	control or dilution v	water may cause pol	lution.						
Se	ction 13. Dis	sposal Con	siderations							
13.1 Waste Disposal Method:		•	ite, and federal regul	ations						
· ·	_									
	ection 14. T	Tansport in	Iomation							
DOT Proper Shipping Name	NT / 1		1 LAND TRANSPORT (US DOT)							
	Not dangerous go									
	חומ	Dous.								
14.1 LAND TRANSPORT (European ADR/F										
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name	RID) Not dangerous go									
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) 	Not dangerous go	pods.								
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name 	Not dangerous go Not dangerous go	oods.								
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) 	Not dangerous go Not dangerous go	oods.	tate, and federal reg	ulations.						
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: 	Not dangerous go Not dangerous go	oods. oods. ordance with local, s		ulations.						
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: 	Not dangerous go Not dangerous go Transport in acco ection 15. R	oods. oods. ordance with local, s		ulations.						
 14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: 	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful	oods. oods. ordance with local, s		ulations.						
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed.	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful	oods. oods. ordance with local, s		ulations.						
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the expression	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful	oods. oods. ordance with local, s		ulations.						
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Se European Community Hazard Symbol codes European Community Risk and Safety Phras R22 - Harmful if swallowed.	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful ses	oods. oods. ordance with local, s		ulations.						
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the eyes S22 - Do not breathe dust. S24/25 - Avoid contact with skin and eyes S26 - In case of contact with eyes, rime	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful ses yes. es. se immediately with pla	oods. ordance with local, s egulatory Ir	oformation	ulations.						
14.1 LAND TRANSPORT (European ADR/F ADR/RID Shipping Name 14.3 AIR TRANSPORT (ICAO/IATA) ICAO/IATA Shipping Name Additional Transport Information: Set European Community Hazard Symbol codes European Community Risk and Safety Phrase R22 - Harmful if swallowed. R41 - Risk of serious damage to the ey S22 - Do not breathe dust. S24/25 - Avoid contact with skin and ey S26 - In case of contact with eyes, rins S36/37/39 - Wear suitable protective clother	Not dangerous go Not dangerous go Transport in acco ection 15. R Xn: Harmful ses yes. es. se immediately with pla	oods. ordance with local, s egulatory Ir	oformation	ulations.						
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Other US EPA or State Lists							
Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65		
1. Cyclic GMP EIA Standard	NA	No	No	No	No		
2. Sodium azide	26628-22-8	No	No	Inventory	No		
Regulatory Information Statement: This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.							
Section 16. Other Information							

07/16/2013

Company Policy or Disclaimer

Revision Date:

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